POETIC OF

$$\iiint dP(\vec{r},t) = \iiint |\Psi(\vec{r},t)|^2 \, dV = 1$$

$$\Delta A \cdot \Delta B \geq \frac{1}{2} \left| \langle [\hat{A}, \hat{B}] \rangle_\gamma \right|$$

QUANTUM PRIMITIVE

CLAUDE PAQUET

POETICS OF THE QUANTUM PRIMITIVE
Claude Paquet

Introduction.

Too often, art historians, so focused on their subject of study, have been unable to relate, rather to understand that art formed one of the essential paths of knowledge of an era in the same way as science, theology, sociology and politics. Hence the manifest incomprehension of the population in general towards contemporary art. It will come back toWladyslaw Strzeminski to undertake the study of these interactions and to identify an original concept. In this study, the painter analyzes the historical evolution of art in relation to the progression of the "visual achievements" of each society. These visual achievements are true symbioses of cultural customs and traditions, scientific knowledge, optical laws and perceptual intuitions, religious beliefs and even mythical illusions of a given society at a specific time. As Strzeminski specifies, the conditions in which man lives oblige him to perceive a certain quantity of visual phenomena very specific to his environment, both intellectual and physical, and this perception is always active, in perpetual metamorphosis during our life. Far from the static, always dynamic like the expansion of the Universe.

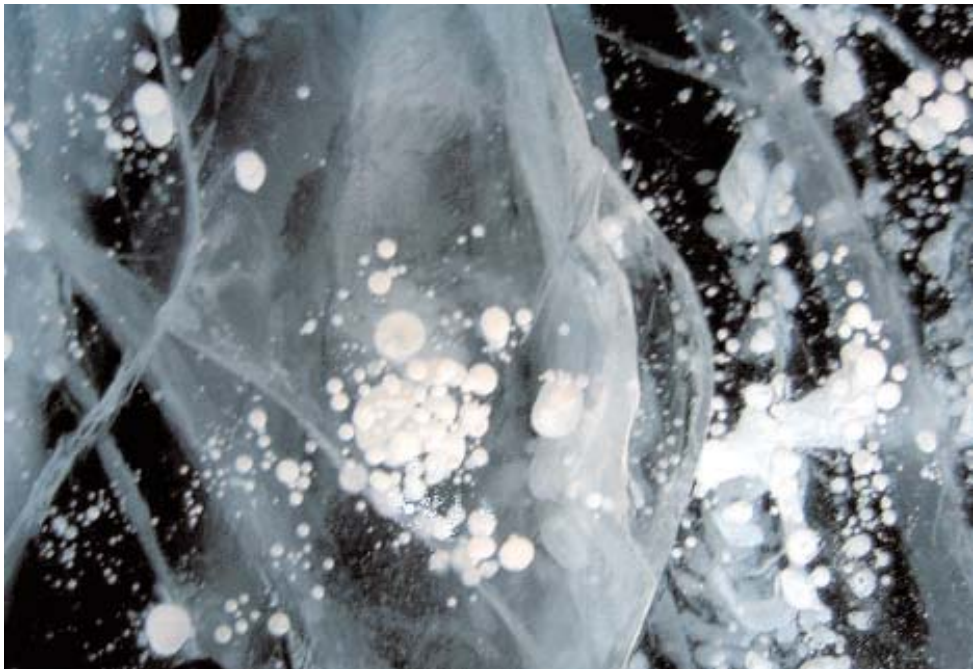
PRIMORDIAL NUCLEOSYNTHESIS

At the beginning of the 1900s, the two pillars of modern physics were born almost simultaneously: relativity and quantum mechanics. Quantum mechanics, the theory of the infinitely small, perfectly explains the behavior of atoms and elementary particles as well as their interaction with light. Relativity describes nature on a large scale, it unifies time and space and establishes the equivalence between matter and energy.

In short, quantum mechanics works perfectly well to explain the infinitely small, to describe the physics on a small scale, that of molecules, atoms, electrons; while relativity also works well to explain the infinitely large, to describe the large-scale physics of the properties of gravity on the cosmic scale, that of stars, galaxies and even the entire Universe. Each theory has been validated by numerous experiments with incredible precision. And yet, they cannot be right because they are incompatible and therefore cannot explain the birth of the Universe.

Why? Let's just say that gravity is one of the four great forces in the Universe along with the two nuclear forces and the electromagnetic force. Yet all of contemporary physics collapses when gravity, usually negligible at the subatomic level, becomes as important as the other three forces. However, this is exactly what happened at the first moments of the Universe when the four fundamental forces which govern the Universe are on the same footing. These four forces are: 1) the gluon, strong nuclear force, 2) the boson, weak nuclear force, 3) the photon, electromagnetic force, 4) the graviton, gravitational force.

Suddenly something happens. What nobody knows, we may never know the cause, at most we named it Big-bang. At the beginning of the last century, it fell to the famous German physicist Planck to point out that science is unable to know what happened before 10-43 seconds since gravity raises an impassable wall to any rational investigation. Beyond the "Planck wall", it is the total mystery. Beyond this wall hides an unimaginable reality, the Origin that only intuition will allow itself to penetrate. At this moment of the cosmic boom, the breakage, the "fall" of symmetry towards the "matter / antimatter" asymmetry manifested itself. Matter-antimatter asymmetry would have been generated during the very creation of baryons. The infinitely



$$n + \nu_e \leftrightarrow p + e^-$$
$$n + e^+ \leftrightarrow p + \nu_e$$
$$n \leftrightarrow p + e^- + \overline{\nu_e}$$

$$\frac{n_p}{n_n} = e^{-\frac{E_p - E_n}{kT}} = e^{-\frac{\Delta m c^2}{kT}}$$

$p + n - D + \gamma$ (γ : photon)
$D + n - {}^3H + \gamma$
$D + p - {}^3He + \gamma$
$D + D - {}^3H + p$
$D + D - {}^3He + n$
$D + D - {}^4He + \gamma$
${}^3H + p - {}^4He + \gamma$
${}^3He + n - {}^3H + p$
${}^3He + n - {}^4He + \gamma$
${}^3H + D - {}^4He + n$
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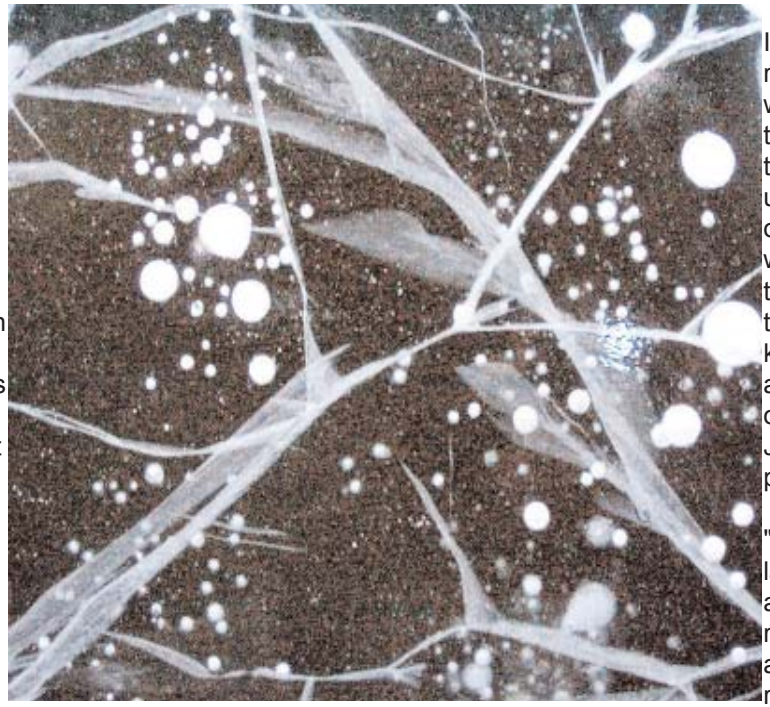
${}^4He + {}^3H - {}^7Li + \gamma$
${}^4He + {}^3He - {}^7Be + \gamma$
${}^6Li + n - {}^7Li + \gamma$
${}^6Li + p - {}^7Be + \gamma$
${}^7Li + p - {}^4He + \gamma$
${}^7Be + n - {}^7Li + p$
${}^7Be + e^- - {}^7Li + \gamma$

small gave birth to the infinitely large. To tell the story of the Universe in chronological order, we take as a starting point a state so hot and so dense that the quarks are not bound together in nuclei, but form a sea, a quark-gluon plasma. . The Universe becomes expansive, cools, and several things happen ... First, the quarks condense to form the first nucleons, protons and neutrons. Bad luck, the neutron is unstable, and decays into a proton after a few minutes, or even less in very dense environments. Fortunately, history is moving fast by this point, and before all the neutrons have decayed, the temperature becomes low enough that they can fuse with protons to form more complex nuclei, deuterium, helium, lithium, beryllium, boron, it is the primordial nucleosynthesis. Finally, these nuclei bind to the electrons everywhere present to form atoms. At this precise moment, the Universe becomes transparent to the radiation it contains, this one can propagate freely and we still observe it now in the form of cosmic background radiation. (futura-sciences.com)



To understand this, we need a theory capable of describing a situation where the four fundamental forces are placed on an equal footing, in short a theory capable of unifying quantum mechanics with the theory of Relativity, because this is possible. . In 1904, the great mathematician Ernst Zermelo formulated a theorem considered to be the crowning achievement of modern mathematics and of all set theory:

"Everything together can be well ordered"

"What Zermelo demonstrated is that any set, whatever it may be, has a relation of choice allowing the totality of the elements of the set to be well ordered. This is a result of great significance, because it is applies to all sets… and therefore to the set of all possibilities, ie to Being as well as the Universe ". (Charon, The lights of the invisible, Edition Albin Michel, Paris, 1985, p.122-123)

Challenged, physicists worked energetically to cross this barrier. Thus was born the string theory. Thanks to this theory, the union of the laws of the infinitely small and the infinitely large is harmonized and has so far proved unavoidable. String theory takes over the incredible intuition of Pythagorean musical harmony described several centuries earlier.

In this multidimensional labyrinth, observable reality is nothing more than a set of fields whose nature is characterized by something totally inexplicable: primordial symmetry. Before the big bang, there is a force of colossal power, unlimited without beginning or end, of unheard-of perfection, of perfect, primordial symmetry, which the Ancients called the One what science today, calls "supersymmetry" or "superstring" at the origin of string theory. The cosmos as we know it from stars with billions of sand grain atoms is just the now asymmetrical reality of a once perfectly symmetrical Universe. (Guitton Jean, Dieu et la science, Grasset, Paris, 1991, p.55)

"In Indian cosmological or physiological speculations, the images of the rope and the thread are used extensively. One could say that their role is to organize any living unit, both Cosmos and Man." (…) For the moment, let us only remember that the image of the rope which links the Cosmos and man to the Supreme God (or to the Sun) is also attested in Greece. Plato uses this image when he wants to suggest the human condition (inner cord) and the means of perfecting it (golden cord). (Eliade Mircea, Méphistophélès et l'Androgyne, Edition Gallimard, Paris, 1981, p.261)

What string theory rationally teaches us by introducing the principle of primordial symmetry is that the search for harmony has always been at the heart of evolution, what archaic civilizations formed by primitive peoples had felt empirically, by brilliant intuition is today what modern science rationally discovers. The properties of matter are decoded but there is still no explanation for these observed properties. In short, we return to the starting point. God, consciousness, original information, Great Spirit, supercord, supersymmetry, whatever, is everywhere, inhabiting every atom. The ONE exists independently of the will of man but needs consciousness to be grasped, which the Indian Bhagavad-gita translated into these terms:

"Everything that exists, mobile or still, comes from the union of the field and the connoisseur of the field".

Upon reading this statement dating back several millennia, the astrophysicist Michel Cassé exclaimed: it is the most beautiful definition of quantum mechanics. "What did he mean?

"Let us not forget this essential principle of quantum theory: the very act of observation, in other words the consciousness of the observer, intervenes in the definition and, more deeply still, in the existence of the observed object: the observer and the observed thing form one and the same system. " What quantum theory teaches us is that observable reality is a game of consciousness with consciousness, that matter, consciousness and spirit form one and the same Totality, now asymmetrical since the breaking of the big bang. In short, the whole Universe, as we know it today, from the stars to the grain of sand is only the broken mirror of the Origin, the pieces of which we tirelessly try to pick up.

Since always and each time that man becomes aware of his situation in the Universe, the symbol of the Cord has been chosen intuitively, regardless of the cultural or religious context, to express his existential condition facing the Cosmos or the Gods. Even modern science like quantum physics is not immune to the phenomenon ; the rope is truly a privileged and primordial symbol in the spiritual tradition of humanity.

With string theory, we leave the reality of the solid body to approach an intangible ocean formed by waves and vibrations. All these particles are in fact small vibrating strings and the vibratory field produced becomes the "relation of choice allowing to order well the totality of the elements of the whole." "String theory states, for example, that the properties of known particles (atom, electron, proton, neutron, quark, gluon, boson, graviton) are only the reflection of the various ways a string vibrates. (…) If this theory is correct, then the microscopic structure of our universe is a multidimensional labyrinth, richly nested, at the heart of which, indefinitely the strings dance, vibrate, twist, thus giving rhythm to the laws of the cosmos. " (Brian Greene, The Elegant Universe, Robert Laffont Edition, Paris 2000, p.33-37)

Towards poiesis.

From prehistory to quantum science, the notion of harmony has always been at the center of human metaphysical concerns. The unity of man and nature as intuitively perceived by primitive societies, from caveman to American Indians, including China and India, was gradually corroborated from the earliest stages of primitive science or rather of Western reason. It all starts with the unity of the four elements: water, fire, earth, air, as recommended by the Greek Empedocles of Agrigento (490-435 BC) who was probably inspired by a precursor , Heraclitus of Ephesus (550-480 BC) who was the first to suggest that nature manages to organize opposites in harmony: "opposites agree and beautiful harmony is born from what differs". Heraclitus therefore insisted on the conflicting origin of all things which are only adjustments, contrasts, precarious balances of antagonistic forces which impose perpetual change. This vision of the harmony of opposites also finds an echo in Chinese Yin Yang and in modern physics through the asymmetry between matter and antimatter.

From the outset, Chinese tradition addresses this concept under the name of "mandate from heaven" which entrusts to the Royal House, more precisely to the "son of heaven" the responsibility of managing the proper functioning of society by celebrating rites that ensure the sustainability of the natural order and their succession in the Universe. Chinese dynasties such as Mesopotamia and Egypt are theocracies ruled by priest-kings. Then, as in Europe, iron made its appearance and its procession of arms, coins and treasures. From a relatively simple economy of self-sufficiency based on agriculture developed the caste of merchants and the production of specialized goods and interregional trade. The social balance was fragmented by various conflicts which led to political disturbances. Between the 6th and 3rd centuries BC, is the period of influence of the philosophers, period called that of the "Hundred Schools". It was mainly on socio-economic problems and their consequences for political administration that the Chinese philosophers looked at.

Traveling from one court to another, the sages exposed their theories and debated in public. Of these hundred schools, two emerged more than the others : Confucianism and Taoism.

Confucius, born in 551 BC, is above all a political theorist who had the genius to transpose the great themes of the primitive tradition and to restore them through an ethical and moral system based on the good man as an irresistible force. Confucius transformed, perhaps for the first time in the history of mankind, the ancestral myths of the primitive religion in "profane" philosophy where the prince is a good man for his people because he has a code of moral conduct : virtue, altruism, respect for others and loyalty to family and ancestors. Contrary to popular legend which persists, far from being adulated, Confucius was despised by the great of this world and everywhere he received the same hostile reception; only a few disciples acclaimed him under the name of "king never crowned". He died in despair from the ignorance of crowds and like many other illustrious men, he rose to fame several centuries after his death. What should be remembered from Confucian thought is that man and his government must follow the will of harmony and the rhythms of Heaven. It is quite simply a matter of living respecting nature and not fighting it; what Xun Quan, in the third century BC, expressed in these terms: "Heaven has its reasons, Earth has its resources, Man has his political order, thus forming a triad with the first two. But he is making a mistake if he does not respect the foundations of this triad by encroaching on the other two. " (quoted by Michel Beaud, Le tiltement du monde, Éditions La Découverte, Paris, 1997, p.67)

From traditional roots, Confucius extirpated the essence of the art of government thanks to the benefit of a social morality ; his subject of study is "our world". But knowing the laws of the sky requires an approach, a knowledge let us say more mystical, a way (the Tao) which penetrates the Mystery. The Taoists, starting from the same ancestral themes, have the intuition that an "unchanging unit" and metaphysics overhangs this world in constant change.

From this metaphysical teaching, the Taoists will outline the main lines of these immutable laws. Unlike Confucius who conceived a philosophy accessible to all, Taoism is revealed to be a philosophy of shamanist origin reserved for a few initiates. Because it is mystical, Taoism will quickly resume the religious veneer that Confucius had strived to eradicate from Chinese thought and Lao Tseu will become its patriarch and the Dao te jing , the sacred book.

According to Ziyen, the most unknown of Chinese philosophers, the notion of cycle is part of the Tao, Principle of all order and all harmony, the immutable Principle of all that changes. The cycle of Transformations, the I-Ching is based on T'ai Chi or Tao as Supreme Principle, the One, the Whole, which leads to the two complementary principles Yin (Heaven, masculine) and Yang (Earth, feminine) whose interaction is at the origin of all change and becoming.

"Through the transformation of the yang and its union with the yin, the Five Agents, Water, Fire, Wood, Metal and Earth arise. When these five material forces are distributed in harmonious order, the four seasons run their course… ". (Wing-tsit Chang, A Source of Book in Chinese Philosophy, Princeton University Press, NJ, USA, 1963, p.465)

In the cycle of the Five Elements, each element is brought, in turn, to prevail over the others and thus to direct a period of history. From this principle of the five moving elements, Ziyen formulated the cyclical theory of history, an essential foundation of Chinese and later Asian thought. The rhythms of Nature are rhythms of the Divine; the cycle of the seasons is a sacred cycle which has been called "the Eternal Return". Let us specify that this "eternal restarting" does not always distill the same cosmic history, just as each spring marks the start of a new cycle different from the previous one. In ancient Greece, this notion of return was called "the cycle of the Great Year".

"Regularly, every 7,000 years, some say, every 36,000 years Plato claims, the figure is established later at 28,000 years, to stabilize at 12,960 years, the stars return to occupy the same positions. But man is so closely linked to Nature that on these same dates… human history also goes through the same phases. Eternal return of the stars, endless restarting of history; sidereal year, year of humanity. ". (René Guénon, Traditional forms and cosmic cycles, Éditions Gallimard, Paris, 1970, p. 23)

This notion of perpetual cycle finds in quantum theory an incredible formulation.

"But what will happen if tomorrow we demonstrate that the big bang does not mark the beginning of everything but only the beginning of an episode among the innumerable that the Universe has known, if we prove that ultimately cosmic history is only an alternation of periods of expansion and contraction? This possibility is not a figment of the imagination. Astrophysicists today consider that if the invisible matter in the Universe (that which is not illuminated and which is sometimes called "dark matter") has sufficient mass, then the gravitational attraction will stop the expansion. , reverse the movement and the galaxies which flee at full speed to the four corners of the Universe will find themselves again gathered in a pinhead to give birth in 10 or 15 billion to a new big bang. If so, it's also because before "our" big bang, there was another "big crunch", and it always has been. This scenario would prove the Tao and the various cyclical religions right ". (Claude Allègre, Dieu et la science, Éditions Fayard, Paris, 1997, p.113)

These alternating periods of expansion and contraction, a sort of cosmic tide, implies that energy is rigorously conserved on the scale of the Universe and its flow of density follows a cyclical course increasing and decreasing periodically with time. As spring differs in each cycle from the previous one, this cosmic tide of energy involves the renewal of a different universe with each passage.

"Here I am in His Nature immersed! Only our names are different now! " (Touka)

In 1983, the American astrophysicist Subrahmanyan Chandrasekkar, of Indian origin, received the Nobel Prize for his work in stellar astrophysics. He indeed discovered the dazzling vision of the ellipsoidal Universe like the Milky Way which forms a coherent whole like a circle which turns in space. Moreover, by studying galaxies, scientists found that all of nature uses ellipsoids. Recall that the ellipsoid is a surface formed by plane curves of which all the points are such that the sum of their distance to two fixed points is constant. Let us now compare this "scientific discovery" with these ancestral words of Black Elk, oglada shaman, as recounted by TC Mc Luhan in Barefoot on the sacred ground, who far from receiving the honors of a Nobel Prize, was massacred, he and his people :

"You noticed that everything the Indian does is in a circle. This is so because the power of the Universe also works in circles and everything tends to be round. (…) The sky is round and I have heard that the earth is round like a ball and all the stars too. When the wind blows at its strongest, it forms eddies. The birds make their nests in a circle because they have the same religion as us. The sun rises in a circle and sets the same. The moon does the same and both are round - Even the changing of the seasons forms a big circle and always returns to its starting point. The life of human beings describes a circle - from infancy to childhood - and so does everything that is animated by the force of the world. Our teepees were as round as birds' nests and they were always planted in a circle, the Ring of the Nation, a nest made up of many nests where, at the will of the Great Spirit, our children were born.

From shamanistic inspiration, Native American cosmology conceives of the presence of the Spirit in all natural forms and beyond all forms. This form of spirituality also called "polysynthetism" (Schuon) implies that any creature, as a starting point, can reach the Great Spirit since everything is His mysterious manifestation. This mystery gives natural forms a mystical meaning which associates order and harmony with the beauty it engenders.

In the Universe of shamanism, a unique order links the human to the cosmic world via the "golden pillar" a kind of interconnection between the natural living and supernatural beings. Nature, man, objects are all part of the sacred dimension of Earth and Heaven. Traditional thought will echo even in Greek philoso-

phy under the idea of the pneuma as the source of the cosmic order which links the essence, the interiority of a body to the other bodies of the Universe by a causal chain.

"To exist is to be a symbol and wisdom is to pierce the symbol of things". (Schuon)

This maxim adequately expresses the perception of things in the Universe as theophanies, that is to say as the immanent presence of the sacred in matter that man can feel by contemplation. From the outside of things, man perceives the divine intention which he incorporates into his soul. We therefore live in a tissue of theophanies, of signs of information that the mind analyzes, man in this sense is a pontifex , a builder of a bridge between interior and exterior reality.

Archaic traditions all live in space, there is no linear time, everything is cyclical, the notions of linearity, finality, Redemption, Salvation, are therefore excluded unlike the religions of the Bible. In the world of Origins, nature is not a symbol of spiritual realities, it is "" spirituality.

"In short, the sacred is an element of the structure of consciousness and not a stage in the history of this consciousness. At the most archaic levels of culture, living as a human being is in itself a religious act, for food, sex and work have a sacramental value ". (Mircea Éliade, History of ideas and religious beliefs, t I, Éditions Payot, Paris, 1976, p.6)

The world is a cathedral and all living beings, humans, animals, plants and even all "inert" matter - sacred mountains - are bearers of souls. Unity as divine Principle is the alpha and omega of all reality. This transcendent Unity is at the origin of all the spiritual and religious traditions which have accompanied human life since the dawn of time.

Moreover, this ultimate Reality goes beyond all that can be said of it, it is the domain of Mystery inaccessible to reason, but open to intuition, to poetic and sacred interpretation. This original Source flowing from cascades to cascades, form innumerable branches revealing the incredible diversity of Being and its manifestations. All this diversity is unified at Source itself, nowhere else; the multiple comes from the Unity (alpha) and returns to the One (omega): "I am the alpha and the omega".

"The Unique can only appear in numbers,
In creation as in these sacred forms,
Which, diverse in their outward appearance,
Manifest one inner, eternal Light.
I looked at Your face, thinking I only saw one,
How amazed I am now to contemplate
Your many faces ".
(unknown author cited in Religion and the Order of the World by Nasr Seyyed Hossein, Éditions Médicis-Entrelacs, Paris 2004, p.13)

It is not a question of proving the existence or not of God but rather of understanding why and how the concept of unity has manifested itself through the millennia. Indeed, the notion of belief in the gods is inscribed in the entire history of humanity from prehistory to the present day. Believing or not in God remains, in both cases, a belief, but this belief in the Absolute has always been imposed on the majority of men and the very notion of deity has also constantly evolved at the rate of human knowledge.

Over four millennia ago, hordes of warriors from the south of present-day Russia invaded the Caucasus and settled in the verdant plains of Iran, on the shores of the Black Sea and the Gaspian Sea. Other tribes migrated to Greece and still others followed the paths leading to Scandinavia and Finland, eventually reaching the British Isles. This migration of the "people of Kurgan" (Western Siberia) is one of the major events in the history of mankind called the Indo-European or Indo-Aryan invasion. This invasion is characterized and called so because Sanskrit, Indian language spoken by these people of Kurgan called later Aryans, is the basis of almost all modern European languages like German, Latin, Greek, French as well as English and Norwegian. The Indo-European invasion is the origin of our so-called Western cultures and the most influential focus in the formation of ancient religions and their fusion with the religions of India. These syntheses of cosmogonies and theogonies which merged at this time are major changes which allowed the constitution of city-nations as in Mesopotamia, Egypt and Iran. The experience of civilization based on a conscious choice of the individual towards collective life governed by laws and rules was quietly born. With civilization, the city also saw the specialization of roles: merchants, administrators, artisans, slaves and his corollary a saving of money based on work. A whole series of spiritual concepts followed the same evolutionary path going from dream, magic, archaic animism (oracle) to the gods. The world was swarming with Gods, also specialized: God of love, agriculture, war, fertility and death, etc.

Several religions and philosophies including Chinese Taoism, Japanese Shintoism, Buddhism and Zoroastrianism, including monotheistic theologies such as Judaism, Christianity and Islamism derive from Vedism and bear the stamp of Indo-Aryan civilization. Initially, Vedism, a name derived from the Vedas, sacred books of ancestral India, favors the view of the Universe as being governed by a multitude of often contradictory forces. The cosmos is naturally benevolent towards man and is opposed to chaos. Good and evil are normal, natural antagonisms, represented by gods (daevas, power) and demons (asuras, counter-power). The whole balance of the world resides in the polytheistic sacrifices and offerings where man pays homage to the heavenly laws resulting from the cosmic forces in action. But all these Vedic gods are only the manifestation of one and only reality: The One, the Brahman. And this One is at the same time multiple (henotheism) because it is also the Prajâpati, that is to say the Lord of creatures, including the gods who are themselves creatures.

We again find the analogy between the primordial vibrations and "the Eternal as" Word "in the Veda from which emanates the entire Universe thanks to the sound of the sacred mantra Aum , the primordial sound which potentially con-

$$\mathrm{Trace}\,(\hat{A}\hat{B}) \;=\; \mathrm{Trace}\,(\hat{B}\hat{A}) \quad \Longrightarrow$$

$$\left[\,\hat{L}_i\,,\;\hat{L}_j\,\right] \;=\; i\,\hbar\;\epsilon_{ijk}\;\hat{L}_k$$

$$\hat{\mathbf{L}}(\mathbf{r}) = \hat{\mathbf{Q}} \times \hat{\mathbf{P}} = -i\hbar\mathbf{r} \times$$

$$= |\langle\beta|\alpha, t\rangle|^2 = \left|\sum w_j|\alpha_j, t\rangle\right.$$

$$\sqrt{E/m} = \sqrt{\frac{0.8186 \cdot 10^{-13}}{9.1083 \cdot 10^{-31}}} =$$

$$\varphi_{RG} \;=\; \varphi_{Einstein} \;+\; \varphi_{Newto}$$

$$= i\hbar\frac{d}{dt}\,|\psi(t)\rangle = \frac{\hat{\mathrm{p}}^2}{2m}\,|\psi(t)\rangle -$$

$$|\psi(t) >= \sum_n \sum c_{n,i}|\varphi_{n,i} > \epsilon$$

$$\frac{\partial^2\Psi(\vec{r},t)}{\partial t^2} \;=\; -\,\hbar^2\;c^2\;\Delta\;\Psi(\vec{r},t)\;-$$

$$\frac{1}{\sqrt{3}}\,[\phi_1(r_1)\phi_2(r_2)\phi_2(r_3) + \phi$$

$$a_2|1,2,0,0,\cdots\rangle \equiv |1,1,0,0,$$

$$\Psi(x,t) \;=\; \Psi_0\;e^{-i(\frac{E}{\hbar}t - \frac{p_x}{\hbar}x)}$$

$$\hat{p}_i\;\;f(\vec{r}) \;=\; -\;i\;\hbar\;\frac{\partial f(\vec{r})}{\partial x_i}$$

$$E\;\;f(\vec{r},t) \;=\; -\;i\;\hbar\;\frac{\partial f(\vec{r},t)}{\partial t}$$

$$\Delta\;\Psi(\vec{r},t) \;+\; V(\vec{r})\;\Psi(\vec{r},t) \;=$$

$$\left[\hat{x}^i, \hat{p}_j\right] f(\vec{r}) \;=\; \left(\hat{x}^i\hat{p}_j - \hat{p}_j\hat{x}^i\right.$$

$c_1 = 2\delta hc^2 = 3{,}741\;8310{\times}10^{-16}$ W.

tains the designations of all things and their mutual relations like an immense poem where our body, inseparable from this kaleidoscope of thoughts, sounds and images, more than a simple living mass, presents itself as an image and a reflection of ourselves through phonation a poetic thought which reveals itself to us in sounds, images, light as well as tastes, smells and flavors of matter in action. Listener, voyeur and actor in the space of his own flesh, of his own life inscribed in places where the poem is imprinted and embodied. "We are collaborating in the accomplishment of a unique work" said the philosopher Emperor Marcus Aurelius.

"The entire Universe is created by primordial vibrations which constitute the Word. The matter, and finally the form, are a digest of this primordial energy ". (Evan M. Zvesse, Ritual Cosmos : The Sanctification of Life in African Religions, Ohio University Press, Colombus, USA, 1979)

The role of the rishis, the Indian shamans was to split the fullness of the original vibration into syllables and phonemes then to combine them to form words, sentences : language, to end up finally in the sacred texts thanks to the writing. These masters of the Word seized on magical practices, myths and beliefs since the dawn of time and proceeded to their poetic formatting : the tale, poetry, discourse of the origins of oral traditions were then transcribed in the Vedic corpus; Veda literally meaning "to know". (Hulin Michel, Les voyants du Véda in Le livre des Sagesses, Éditions Bayard, Paris 2002, p. 40)

The Universe as a thought / word, a poietics which materialized by combining with materials in order to form a visual poem of shapes, colors, sensations ; the Universe as a poem which creates its own verbi-voco-visual language according to the archaic Tradition of the first peoples. To the material beauty of the forms is juxtaposed that no less mysterious and immaterial of the Breath, of the Word, as expressed by the throat chants of the Inuit and other universal shamanist mantras or chants at the origin of "In the beginning was the Word" .

This supposes that our universe is a paradoxical world, a thought conscribed in matter and we will see that our universe is only that, paradoxical, thanks to the quantum equations on the "memory points" of matter stated by de Broglie, price Nobel Prize in Physics.

In ancient Greece, poetry constitutes one of the typical forms of the shamanistic experience inherited from the archaic cults of prehistoric times where the divine Word is transmitted to the medium.

The aède , the poet is the shaman of ancient Greece; and it is in this capacity that Homer and Hesiod were recognized as the founders of culture. Thus the poet becomes a being of memory capable of connecting the past, the present and the future in an allegorical story thanks to which the whole of society understands its origin and discerns the tensions and balances which constitute its structure. So Homer, in the Iliad , asserts that the Ocean is the father of everything. The Theogony of Hesiod (VIII th century) is already more complex because it is a first synthesis of ancient traditions. Hesiod uses his poetic intuition and his inner experience to "invent" the Origin of the World from the Void.

For ancient Greece, the cosmos is a term whose primary meaning means "order" but also beauty and harmony. At the beginning, Thales of Miletus, born around 625 BC. JC, believes that the earth is carried by the water which surrounds the planet below and above the celestial vault in the image of the fetus bathing in the placenta in the womb. This Universe is small and closed, hence the concept of "cradle of humanity". Subsequently, with Anaximander the cosmos bathes in apeiron i .e. the Infinite. The Undefined and the Indeterminate. The cosmos is a balance between equal and opposite forces (water, fire, air and earth) like the Chinese T'ai Chi and the Indian Veda . The multiplicity of things are ordered in a whole called the Cosmos and this whole is governed by laws. It is in this historical constant that the undeniable influence of the philosophy of Pythagoras is located.

It will be up to Pythagoras (6th century BC) to be the first to establish an unprecedented link between the traditional vision and the nascent ancient science. Pythagoras traveled to Egypt where he learned from priests and scholars. According to Porphyry, he learned the mathematical sciences from the Phoenicians, the geometry from the Egyptians, the study of the sky from the Chaldeans and the precepts on the conduct of daily life, he received them from the Persian Magi. Heraclitus will say of him "that he is of all men the one who drew the most from historical sources; he made a choice in all the works and composed his own wisdom ".

Pythagoras firmly believes in the existence of a natural order and what interests him in the first place is not to discover its material substance but rather its structure. Pythagoras, "father" of mathematics, strongly inspired by the Babylonians, introduced the mysticism of number as the principle and source of all things. "All is number" and "All is harmony of opposites", all that is alive is related to it hence the study of astronomy.

The work of Pythagoras comes to the conclusion that mathematical laws govern the order of things based on harmony, more precisely musical harmony: "the music of the spheres". Music and the natural order of the Universe are interconnected by mathematical links. With musical harmony and the mathematical concepts inherent in the constitution of the world, Pythagoras leads us with him towards abstraction as knowledge of the Universe; matter becomes subordinate to the idea, to the thought which structures it. And thought forms the speech and governs it by the participation and the mixing of ideas in the same way, that the music manages all the sounds including the intervals or silences because in harmony no isolated element can exist without relation to d 'other. "It is through the mutual interweaving of forms that the discourse is born to us". (Sophist 259 e) Forms, according to the philosopher Plato, manifest the thoughts of God, reveal the way God thinks. We know God only in the contemplation of forms, in the same way that God contemplates Himself in forms. The entire cosmos includes not only the world of ideas but also the sensible world of forms, the two being inseparable. The Universe is indeed a structured organism.

The principles of this structured world are, according to Pythagoras, numbers

and their harmonious relationships, as perceived in geometric shapes. From the monad and the indefinite dyad are born the numbers, and from the numbers the points, from the points the lines which generate the plane figures; the plane figures generate the three-dimensional figures from which are born the sensitive bodies composed of four elements (fire, water, earth, air) which are transformed into one another. The nature of the number is the decade, the power of which is contained in the number 4.

These statements of Pythagoras are so new for the time that they must be kept secret by his disciples on pain of death. Several clues suggest that he would have composed his philosophy according to the account of the shamanistic clairvoyances of Salmoxis, his slave. With Aristeus, Abaris, Epimenides, the hypothesis of a Greek shamanism tends to impose itself. The Greek citizen has acquired the certainty of this with the epic poems (Iliad and Odyssey) of Homer and the great religious poem (Theogony) of Hesiod.

Influenced by Pythagoras, philosophers will deduce that men had to imitate this order of musical harmony and mathematical laws because it emanated "from a living creature endowed with a spirit and an intelligence" (Plato) whose Wisdom is revealed by "a perfect order of the Whole" (Cicero) and Nature as the work of God teaches men the order necessary for its fulfillment (Aristotle). God is cosmic.

The theos (Xenophanes) marked the beginnings of the separation between God and Nature. A few years after Xenophanes, Heraclitus seeks "to know the Thought which governs everything and everywhere" and in his quest conceives the logos, the eternal reason as the foundation of all things. As a result of these metaphysical reflections, Anaxagoras deduced a concept which unifies both theos and the logos and which he called the noos , a capital term still today, the famous noosphere, which designates the unity of thought. , intelligence and spirit which gives the Universe its order and its beauty.

Henceforth God is both the cosmos unified with the nature of archaic traditions and a transcendent Being, the theos-logos-noos trinity, creator of Heaven and Earth to which man and all things are subordinate.

Between 800 and 200 BC took place a prodigious intellectual revolution crossing China, India, Persia, Palestine and of course Greece. This period described as "axial" by Karl Jaspers in Origin and meaning of history , represents a pivotal moment when the principle of individuality bursts into history. Man discovers an interiority which places him alone before the creator; behind the collective destiny there is a personality that seeks to merge with the divine. This intimate relationship with an interiorized divine allows communion between the greatness of God and the autonomy of human thought and opens the door to the philosophical understanding of what God wanted to do.

Socrates (470-399), very happy to discover the concept of Anaxagoras noos, begins to read his work only to come out immediately disappointed. Indeed, the physicist was content to speak of intelligible cosmogony without addressing the beneficial consequences for it. Resolutely, Socrates took part for the ethics of the good that is to say, that he is convinced that the noos as supreme intelligence endowed his work with the best possible dispositions, such is Providence. God only wants the good, but man is nevertheless responsible for his choices. He then lays the foundations for an idealistic and dogmatic system which slides towards the moral domain: to know oneself, to heal one's body and to act adequately according to the gods. Following him, Plato and Aristotle will take the pilgrim's staff. The sky and the earth form a Nature where the idea of the Good sits at the top according to Plato or the Pure Act will say Aristotle.

So originally, cosmos / nature, spirit / knowledge formed a whole, but with the introduction of the concept " cosmos = living being" by Plato, the concept of the Supreme Being and its corollary, the idea of creation. Plato (428-348) will make divine goodness the first cause of our existence because only the goodness of the celestial "Father", the poiètès , the " maker " allowed the order to emerge from the disorder. "It is indeed impossible for the best Being to produce anything other than what is best" he affirms in the Timaeus . He takes the idea of his teacher Socrates who maintains that, from his own point of view, every man seeks what is good and believes to do what contributes to it, nobody seeks what is bad.

According to Plato, our world becomes a living order oriented by the Socratic Good whose soul contains Pythagorean harmony in the musical sense. The harmony of the Soul of the world becomes the symphony by which the elements of the world and the movement of the heavens come together and where the Good largely outweighs the Evil. One of the difficulties encountered by ancient philosophy is that nature is the site of the accidental: the best example is the existence of monsters. On the other hand, nature is not for all that completely delivered to chaos, an order emerges from the observation: "nature does nothing in vain or superfluous."

Aristotle (388-322), inspired in his turn by the work of his master Plato, will make the search for knowledge through the contemplation of the visible and the sensitive, the basis of his spiritual quest. Aristotle builds his philosophy from the observation of physical realities, the most penetrating of which is that of the perfection of the movement of the cosmological order which designates a source, the primary reality of a first being: the divine as Source of intelligibility of the Universe, as a pure act of existence.

Almost all of the Greek schools of thought recognized a divine Principle linked to the natural order but henceforth the divine Principle will be either immanent in everything as in Aristotle and the archaic traditions or transcendent as in Plato and the monotheistic religions.

The dissident school will be that of the atomists (Leucippus, Democritus, Epicurus, Lucretia) who will inspire modern science - being is an infinity of atoms - for whom the natural order is not of divine origin but corresponds to interactions of atoms according to a "so-called conservation of nature" law - nothing is lost, nothing is created - cosmic, mechanical, mathematical and atheistic law. Atomism is presented as a natural law freed from all supernatural interference and its followers will become the fiercest opponents against the

deification of the stars and of the world in general. Epicurean morality seeks to establish peace of the soul through the rejection of religious superstitions and the serene acceptance of the vagaries of life. But beyond this observation, it is important to point out that the whole philosophy of the atomists is limited to the sensitive world ; what is offered to our senses is the sensitive world, which Epicurus stops at the stars, since the stars stop sight. So that the central point of the analysis is not the infinite totality of the Universe but the world that we perceive, the atomist tries to explain why this world is so and not otherwise. The founding element of this world is the atom, a solid body bathing in an ocean of emptiness. The whole is body and void as infinite as void and the number of atoms. The atomists' intuition is great except that the problem remains : where does the atom come from ? What are atoms made of ?

From the Greek atomists, thought is divided into two currents: that for which the harmony of the Cosmos is based on a divine Intelligence (transcendentalism) and that which teaches that everything is matter and is based on the law of chance, of moira , of fate. (materialism). Nevertheless all these schools shared the idea of the existence of an order in nature and governed by a law of the cosmos, either the Moira or the Logos or the Theos or the Noos from which emanates a moral order which governs men. and their societies.

Subsequently, the transcendent monotheistic biblical religions gradually dissociated the divine Principle from the natural principle. Because the Jewish religion by enthroning Yahweh as the only God has also created the history of the world with a beginning, a meaning and an end.

Since the notion of cyclical time comes from the observation of nature, the rhythm of the seasons, the day succeeding night, the movement of the planets and the moon, the sons of Abraham will firmly reject these pagan visions of history. cyclical and above all, astronomy, this new science which seems to prove ungodly peoples right. While the Greek world already knows that the earth is a sphere thanks to Aristarchus, born in 310 BC, who established the dimensions roughly, it will remain for Christians a disk for another 1,500 years; the human being occupying the central place. The church, our Mother the Church replacing the universal Mother Earth.

It is undeniable that the Abrahamic religions (Judaism, Christianity, Islam) were the first to uproot man from nature and to speak out vehemently against naturalistic mythologies. True combat against the sacred cosmic, solar god, lunar goddess, against the sacred of natural forces, god of thunder, goddess of fertility, etc. Nature commands no special respect. God does not participate in these realities, he transcends them. Biblical creation is a total stripping of the archaic sacred

Before the perfection of the Superior Being, man can only stoop before so much Magnificence, such is the meaning of the Fall of man, bringing nature with him. (Erigene) Thus this nature having participated in the Fall of Adam and in his exile from the terrestrial Paradise became vitiated, disorderly. A vicious nature took the place of a benefactor nature since man dragged the latter into its fall. This idea of nature responsible for the Fall of man will obscure for centuries the spiritual significance of the divine natural order.

It was not until the Middle Ages when, under the influence of the Arabs, mathematics, experimental research, the exact natural sciences inspired by the Greeks were reintroduced in Europe. A movement then seized the spirits.

"For the alchemist, nature reveals its secrets through scientific knowledge and the magical constraint of the occult sciences. The alchemist perpetuates the myth of the blacksmith of prehistory and the technique of transmutation of matter. Always imbued with "religiosity", it is the mystical drama of God, his life, his death, his resurrection, which is projected onto Matter to transmute it. The alchemist treats Matter like the "priest", the diviner, interprets the Mysteries. Transmuted Matter acquires the symbol of immortality (Gold) and redemption through the work of alchemist. The astrologer, the blacksmith, the alchemist, all dream of quick means to come to dominate the environment. The dream directs human activity. Magic becomes a shortcut by which man wants to penetrate the secret and mystery of life. The great originality of alchemy was to create the instruments which allowed the acts of grinding, grinding, burning, distilling, dissolving matter as well as the observation of the results. Alchemy was the bridge that allowed the imagination to reach the shores of science ". (Lewis Mumford, Technique et civilization, Éditions du Seuil, Paris, 1953)

With Copernicus, Kepler and Galileo a real crisis of civilization begins: the earth is no longer the center of the world, it is the earth which revolves around the sun and not the reverse, taking up the statements of Aristarchus ten. - eight centuries later. By this affirmation of heliocentrism, a whole vision of the world crumbles. Man finds himself lost and alone in the infinite where man is no longer the center.

The year 1632 marks the year in which nature was irreparably defeated. Now conquered, the archaic goddess of Mother Earth is emptied of her spiritual substance to fall into disgrace of her new attribute; nature is a machine, God a watchmaker. The natural signs indicating the presence of God become mathematical and geometric abstractions.

"It (the Universe) is written in the language of mathematics, and its characters are triangles, circles and other geometric figures, without which it is humanly impossible to understand a single word; without them, we set off on an adventure in an obscure labyrinth ". (Galileo, Il Sagiatore cited by Stillman Drake in Discourses and Opinions of Galileo, Doubleday Anchor Books, NY USA, 1957, p.237-238)

Unlike Pythagoras for whom mathematics represented the thought of God and nature his symphony, with Galileo, mathematics becomes pure and hard, cold laws while nature begins to decay. Nature is thus stripped of its forms, its colors, its smells, in short, the intrinsically divine substance replaced by mechanical concepts, purely materialist.

Since the Paleolithic, man has not ceased to create increasingly sophisticated tools to increase the power of humans over their environment and thus ensure

their survival. Like our Australopithecus ancestors who gave tools a spiritual aura, the machine will become the new secular goddess of modern man.

Man is spiritually and psychologically off-center. This "heresy" of Galileo will be severely judged by the tribunal of the Inquisition: Galileo will have to retract on pain of death. Descartes will be able to analyze the theological context of the time very well and will hasten to redefine the place of man in the infinite. Although sharing the views of Galileo as well as the scientific revolution which is beginning, Descartes understood that it was necessary to give back to man a place in the infinite under pain of anathema and social seclusion. Since the first certainty is that of my existence revealed by consciousness, by thought (I think therefore I am) and that nothingness, infinity, nature, cannot think, then "I", my consciousness of to be, is the fulcrum of all knowledge. It is through my consciousness that the world, galaxies, planets, nature, the other exist. Descartes has just placed man again on the throne of the Universe, inspired by the Christian theology of God made man. By actualizing the Incarnation of God in the "I", Descartes thwarts the Inquisition and gives man an anthropocentric position.

From now on, the body is associated with a mechanism, a machine. By describing the natural world on a purely mechanical basis, Descartes transferred the divine order to the machine, the one that will satisfy our desire for domination. In his Discourse on Method , he observes:

"Because they (the difficulties in physics) made me see that it is possible to achieve knowledge which is very useful in life; and that instead of this speculative philosophy that is taught in schools, we can find a practice of it, by which, knowing the force and actions of fire, water, air, stars, heavens and all the other bodies that surround us, as distinctly as we know the various trades of our artisans, we could use them in the same way for all the uses to which they are specific and thus make us masters and owners of nature "

This desire to dominate nature directed the human spirit outward and suggested the need to act on this world and thus create the necessary instruments to achieve it. The emerging scientific method made it possible to simplify the complex, to isolate the elements between them. Science specialized in concentrating analysis only on the material world, it was indeed to de-spiritualize nature.

All of the deity's naturalistic attributes were replaced by the one power "which really is: the Will of reason." And Hegel continues his reasoning in Reason in History as follows : "the Will of Reason, the Good as it is concretely, is really the greatest power: the absolute power which is realized. The true Good, the universal divine Reason, is also the power capable of being realized. The most concrete representation of this Good, of this Reason, is God. " (Edition 10/18, Paris, 1965) The man endowed with reason exists as the fulfillment of the divine plan. Man can therefore act on the real since it is The Ideal which is realized.

Acting on reality, this is the work of the craftsman, the engineer propelled to the front row. The development of techniques is not only a material revolution but also a cosmological and of course metaphysical upheaval. All the cosmological conception of the Universe, all the traditional conception of objects and forms that man had patiently put in place, collapses like a card game. In the eyes of the historian of science Alexandre Koyré, it is "the most profound revolution accomplished or undergone by the human mind since the invention of the Cosmos by the Greeks".

"The nature of Galileo," written in mathematical language ", the nature of Descartes, where everything is done by" matter and movement "is indeed the work of the creator God. But this God, Voltaire's "eternal geometer", is in reality the most formidable guarantee that human reason has ever given itself in its conquest of nature. " (Jacques Roger, Science returns our image to us in Série sciences en société no.9, Autrement, April 1993, p.131)

"Know that we do not have two hearts, one for oneself, one for animals, one has one or not at all". (Lamartine)

Thomas D'Aquin (13th century) developed the concept of a universal hierarchy on the basis of different degrees of realities where God is pure, transcendent reality and under him, everything is determined according to His Providence and His Justice. The order of nature is based on the degree of likeness to God. Borrowing the concept of intelligible structure from Aristotle, Thomas Aquinas concludes that everyone, both physical and natural, obeys a "desire" to imitate God both by his existence and by his actions. Thanks to this hierarchy of beings and things, man, since he resembles God, will proclaim himself "vice regent" of divine Creation and will arrogate to himself the right to dispose of nature, animals, plants and even pagan and ungodly souls at his will. Thus since God has revealed himself to man and to him alone, all nature therefore loses its sacred character.

It is up to the theologian Lulle, who died in 1315, to synthesize the message of the Incarnation of Christ, of God in man and nature. Idea that Llull actualized in nature with the "scientific" idea that man thrones over the animal and plant world.

From the beauty, the "wisdom", the majesty of living beings, animals and plants, we have only retained their food and domestic usefulness and have abandoned them to the lamentable fate to which we have imposed them.

The classification into clean and unclean animals, an endless list of dietary precepts and a series of decrees including the prohibition of sodomy with beasts, this is the context in which a monotheistic theologian learns about animals in the Old Testament. Regarding nature in general:

"Submit it; rule over the fishes of the sea, the birds of the sky and all the animals that crawl on the earth "(Genesis I, 28).

With regard to animals in particular :

"Do not make yourselves filthy with all these swarming critters, do not infect

yourself with them and do not get infected with them. For it is I, Yahweh, who am your God. You have sanctified yourselves and you have become holy because I am holy; do not make yourself unclean with all these critters that crawl on the earth. (Lev 11 : 43-44)

The notion of an elected people was transformed into an elected species: only man is holy and this anthropocentric notion will have inestimable consequences on our relationship with the environment and on other animal and plant species.

Continuing its momentum, Descartes then proposes the thesis according to which it is impossible to find a difference between the animal and the machine. Spinoza, for his part, declared that humans have the right "to use animals as we please and to treat them according to what suits us best since they do not agree with us by nature and their feelings are inherently different from human feelings ". Finally, the philosopher Fichte completed the picture and affirmed in his Doctrine du droit naturel in 1796, that all domestic animals are "under the tutelage" of man for "regular use" and are only "property". . As for wild animals, they are "harmful" and "considered an enemy". This is how what in the West now appears to be a universal commonplace was formulated: anthropocentrism does not recognize a right to creature, it only knows the dominant men and their needs which will perpetuate, like many ancient societies before, the enslavement of dominated men to work like beasts of burden, slavery as a concept of human greed and, at worst, to eliminate those who will resist.

The contempt displayed by the Church towards nature and the human body - the body tends to corruption - opened wide the doors to the mechanical and machinist visions of applied science. The machine, by its copy of the functions and members of the body, only projected the vision of a mutilated body already martyred, scourged, hated by religion.

In all biblical religions, the earth is a prison from which to escape. To the curse that strikes man in Genesis is added that on the earth where he was born : "... curse the ground for your sake!" By dint of pain, you will get sustenance from it every day of your life. He will produce thorns and thistles for you and you will eat the grass of the field… "(Gn 3, 17-19)

Because nature is the seat of all evils, of all sins. The Dutch painter Hieronymus Bosch, like the medieval Catholic Church, sensed it well. Bosch's pictorial work defies the laws of nature; one can even add without being mistaken: a work against nature. Bosch's figures have gaunt heads, pale faces distorted by grins of hatred, faded skin; they give the general impression of living in sick and suffering bodies. Their environment is strewn with broken twigs, thorny branches and sharp tree trunks evoking a disturbing, hideous, monstrous, diabolical nature.

Who is Hieronymus Bosch? His birth is located around 1450. A Flemish chronicler of the time (1566) described the painter as a "devil maker"; man being an incorrigible sinner doomed to eternal damnation. Impression shared by his contemporaries throughout Europe as evidenced by this statement from a Spanish chronicler:

"The difference between the works of this man (Bosch or Bosco as we say) and those of others, consists, in my opinion, in that the others seek to paint men as they appear seen from the outside, while he has the courage to paint them as they are inside, inside. " (Sigüença, 1605)

As if five hundred years ago, Bosch would have had the premonition of both Freud's psychoanalysis, Jung's depth psychology and Breton's surrealism. Well no ! Bosch's work is indeed the religious expression of the Bible. Hieronymus Bosch is the painter mainly of insane visions, catastrophes conceived by God: floods, earthquakes, invasion of locusts, famine, carnage of cities, ruined temples, so many disasters necessary to appease his anger and purify the ungodly people.

All of Bosch's work is also the expression of medieval life and of Manichean-inspired thought under the influence of a despotic clergy who has the right of life and death over the people. Bosch is the painter of the Inquisition, without a doubt. He is the "painter of horror, of true horror, the one who is part of us, who is ourselves." Bosch's works are veritable discourse on the failures of nature and of man invaded by evil, an expression of "the nausea of the soul" and act as a catharsis, an exorcism at a distant time of modern psychology since the interpretation of dreams was then associated with witchcraft and severely punished by inquisitors.

" Comtemptus mundi " (to despise the world), this is the state of mind of the Inquisition by which we must "understand the rejection of all sensuality, but also the disapproval of all conduct whose goal is to enjoy life. and accumulate property; it is a warning against the devil's tricks and an exhortation to resist temptation, in short, everything that words like admonition and mortification evoke. Man must realize that his destiny lies in the hereafter. This is the main message Bosch seems to have recorded in his tables. " (Marinjnissen Roger-Henri, Ruyffelaere Peter, L'ABCdaire de Bosch, Flammarion Edition, Paris, 2001)

Even his earthly Paradise is painted as a haunted, corrupt hellish place, a veritable pandemonium, a garden of vices and terrors. The people, faced with such a spectacle, could only hope to reach as quickly as possible the heavenly garden of Paradise where, according to Bosch, the souls of the righteous and the blessed enjoy eternal bliss, in the company of angels and saints. This was the psycho-educational function of art.

The world is an unfinished work and the destiny of man on earth is to complete the initial work under the auspices of God. The world appears more and more like a battlefield where the mighty blind people clash. As for the Gnostics before, the world is bad and the philosopher Hume generalized the idea thus : "A perpetual war is ignited between all living creatures".

Nature, the world can no longer help us to become men; only the transformation of the world can participate in the edification of man. From association with nature we move on to its exploitation. But above all, acting on reality implies that the world is imperfect and therefore perfectible, that nature is malleable

and subject to the beneficent action of man.

In the theoretical works entitled Principia and Opticks , Newton (1642-1727) postulates that all the observed phenomena involve a mathematical and geometric description in the form of mass, size, volume and movements: God created the world from the principles of geometry and mathematical laws. Continuing the thought of Galileo, Kepler and Descartes, the discovery of gravitation by Newton confirms that the Mechanical Order governs the Universe.

Newton is at the origin of what is called classical mechanics, of which Newton's three laws constitute the foundations: the principle of inertia, the fundamental relation of dynamics and the law of reaction. He invented, at the same time as Leibniz, the differential calculus, which he named the fluxion method and which he used to formalize his description of gravitation as a universal force of attraction. The law of universal gravitation is written as follows:

Thanks to the scientific revolution, space became real; it is then a question of appropriating it through conquests, time is real; so let's divide it into hours and minutes, matter is real; codify it by measuring and weighing it. Naturalistic science did not escape this instrumental tyranny; she also tried to prioritize nature from man as the supreme value and sought from this perception to establish the orientation of our choices. Nature existed to be explored, to be invaded; it had to be conquered to be understood.

Thus began the "disenchantment of the world" The human-nature relationship was broken and marked the passage from the state of nature to that of culture. As if human nature now belongs to a lost paradigm. (Edgar Morin.) Modernity is five centuries of fragmentations, divisions and negation of what brought us into the world.

The archaic nature of primitive peoples and traditional philosophies, as it was once contemplated, was the reign of Good. All their spirituality converged on the celebration of life, however darkened by disease and death. However this evil resulting from diseases, death, disasters were considered as natural acts represented by demons that it was possible to ward off by rituals and mysterious words carrying healing which the sorcerer is the depositary. There is no trace of a fault contingent on humanity that man is called to expiate by repentance and bodily mortifications.

Modern nature, a place of violence between species, is the kingdom of Evil. Since the Good is no longer in nature, it must be introduced there by human action. Modern technique thus takes on its metaphysical meaning of Good combating Evil.

"The ancients and the medieval were not unaware of the technique; the Western Middle Ages invented or generalized agricultural processes which allowed an improvement in the human condition, starting with a demographic increase. But these results were not considered to bring a good which would have exceeded the level of the useful and the convenient. For the Moderns, on the other hand, to fight nature is to fight evil and spread good. In this way, technical production sees the strength of moral practice put to its credit ". (Rémi Brague, The wisdom of the world, Éditions Fayard, Paris, 1999, p.240-241)

Nature must submit to human will and will end up radically upsetting the order of nature which will henceforth depend entirely on the human being as the center of everything.

Man became the idol of himself and the machine, his creation, the new religion, the mechanical conception of the Universe which will serve capitalism as the foundation of the dominant ideology of modernity. Faith had found a new object: power through the control of mechanical order. The holders of capital and the Church subservient to them preached the Gospel of work, faith in mechanical science and salvation by machine and mechanical routine, especially as the paradise of financial success was at the end of the production line.

Calvin, Luther and the early Reformers and fathers of Protestantism developed such a contempt for nature that they fervently endorsed this new mechanical conception of soulless nature and modern science as a tool of exploitation.

The process of desertification of the being initiated previously by religion continued. By separating the soul from the body, by giving the soul an autonomous reality, we therefore made it possible to dissect the functions of the body, think of the dissection experiments of Leonardo da Vinci for example. The body and the blood were replaced by a mechanical abstraction which could be manipulated indefinitely.

William Paley (1743-1805) a member of the Anglican clergy, is passionate about the natural sciences and collects all the major works in zoology, botany and anatomy to illustrate the basis of his work published under the title of Natural Theology . By searching for the divine predispositions hidden in the living world : man, animals, plants, he opened the door to future molecular research and genetic manipulation.

This "man of god" of the Anglican Church who all his life sought God in nature contributed in spite of himself to his evacuation. Because supreme paradox, the more scientists look for proof of God in nature, the more their work progresses, the more they reject God as the primordial cause, like Darwin, who began his journey on the Beagle with faith fading over time. according to his discoveries to finally disappear leaving room for the theory of evolution. Thus the Marquis de Laplace (1749-1827) , renowned mathematician and astronomer, who comes to the conclusion that "the elements of the planetary system are ordered so that he must enjoy the greatest stability. " Worried about such remarks on the Universe as a self-regulating system, Napoleon Bonaparte, imagine the scene, ask Laplace where is the place of God in his system? And the astronomer replied "that he did not need this hypothesis" in front of a Bonaparte amazed by so much audacity.

By thus placing man (chosen species) on the throne of nature in contempt of other animal or plant species, the instrumental hierarchy already carried within it the germ of the notion of exclusion and racism: there is an order. nature of

animals and plants as there is a natural order of man, some being placed higher than others on the pyramid.

"When men will know the effectiveness of this instrument (reason), what hell will they not create around them." (Georg Forster).

The work of man associated with the machine, the man working like a machine by isolating from the body that the functions which have market value are so many methods and concepts which increase its efficiency. Both humans and matter were considered natural resources.

"Taylorism and any work organization that prevailed in the XX th century in Western society stems straight from the worldview disseminated by science" classic ": the world was a big deterministic with mechanical particles and laws governing their interaction, the company must therefore be modeled on what "works", it must be a great mechanism where men will be the elementary particles whose "interactions" will be regulated by procedures. The quantitative will reign supreme, rate of profit, GNP, etc. will be indicators of the "well-being" of society. " (Jean-Marie Pelt, God of the universe, science and faith, Éditions Fayard, Paris, 1995.)

Both the environment and human life were treated as abstractions. With the industrial era came massive pollution of waterways and air and its attendant diseases: smallpox, typhoid and tuberculosis. The worker is treated as harshly as the environment or rather like it, as a renewable material to be exploited until it is released into the environment. Smoke from coal factories is to air pollution what poverty is to social pollution. The automatic rhythm, the exploitation of children, the fourteen-hour day, life expectancy of twenty years lower than the bourgeois class because of industrial diseases, this is the "postcard" of the eighteenth and nineteenth century.

Claude Lévi-Strauss does not take white gloves on this question. He notes that on the one hand " we surround certain syntheses such as the works of great artists with real veneration : painters, sculptors, musicians. We build museums which are a bit the equivalent of the temples of other societies, to collect them there, and it would appear to us like a disaster, a universal catastrophe, if all the work of Rembrandt or Michelangelo were destroyed ... ". But on the other hand, what do we do with the masterpieces of Nature ? Are we only able to respect them ? " When it comes to syntheses that are infinitely more complex, and also infinitely more irreplaceable, which are living species, whether they are plants or animals, then we act with irresponsibility, with total casualness. " conclude Lévi-Strauss. We have lost the poetic listening to Nature.

"What reaches the earth, also reaches the Sons of the earth (...) If human beings spit on the earth, they spit on themselves. (...) Everything that happens to animals will happen to humans too, very soon. (...) The white man, who temporarily has power, already believes that he is God - to whom the earth belongs. (...) Continue to dirty your bed, and one night you will suffocate in your waste. (...) For that we know - our God is the same God. This land is sacred to him. Even the white man will not escape this common fate . (From Chief Seattle's 1856 speech, quoted in The Washington Historical Quartery 22, No. 4, October 1932.)

"Love for principle, Order for base, Progress for goal"
(Auguste Comte)

Everything is in place to celebrate the great liturgy of progress as prophesied by Auguste Comte, Marx, Saint-Simon, Victor Hugo, Michelet for whom technology opens an era of happiness for mankind, that progress will dispel "the two scourges. of mankind, stupidity and wickedness. " The great visionary of the religion of progress is undoubtedly Concordet, who, already at the end of the 18th century, announced "the triumphal advance of humanity towards science, wisdom and happiness" and above all, here is his gospel "That scientific and technical progress ensure not only the well-being of humanity but also its moral amendment". The progress of the human mind is perfectible in the same way as that of the sciences.

Saint-Simon, in the Catechism of Industrialists (1805), develops a plea in favor of an elite of scholars, artists and industrialists who will take the destiny of men in hand to ensure the happiness of all classes of the society. It is the religion of progress and the missionary role of science where initiates are called to free man from barbarism and superstitions.

It was up to the Frenchman Auguste Comte (1798-1857) to establish the atheistic bases of the scientific religion that is "positivism", going so far as to publish a positivist Catechism, a secular calendar of secular festivals replacing the feast of the saints. He published his major work under the title of Course of Positive Philosophy supporting "positivism" as the new religion of humanity.

We find this happiness of humanity in the mastery of nature by the sciences since the utopias of the Renaissance: in Utopia (1516) by Thomas More, in La Nouvelle Atlantide (c. 1600) by Francis Bacon, in La City of the Sun (1623) by the Italian Tommasso Campanella, in The Discourse on Method (1637) by Descartes, in Research on the Nature and the Cause of the Wealth of Nations (1776) by Adams Smith, in Cours de Philosophie Positive (1830) by Auguste Comte, in l'Avenir de la science (1890) by Rénan, in Récits des temps futur (1899) by Wells.

In short, Comte argues neither more nor less that the end of metaphysics is necessary for the advancement of mankind. Any questioning of God and myths is futile. Thus we ask Reason to demystify a deceptive imagination, intuition, poetry are placed in the dock of the accused of historical drifts and intellectual and social alienations of humanity. The regeneration of man goes through the denunciation of the archaic myths which enslave him.

It is then a question of concentrating on science as an application of the functional phenomenon. By refusing to think beyond the physical, applied science closes the door to any attempt at philosophical exploration of reality and locks human thought into an ideological prison, a sort of single thought where it is not the why that a thing exists that matters but how it works. Man is an application

of functional phenomena such as demonstrated by Paley and that science must develop. Both humans and living beings are considered natural resources, a reservoir of mechanized biological organs.

Thus science created its own myth of prolonged initiatory wisdom in saving techniques building the "antechamber of Paradise", supported by political messianisms, as much from the right as from the left, proposing neither more nor less the salvation of humanity. Auguste Comte proposed to carry out "the spiritual reorganization of the West" by wishing for total submission to scientific-historical truth, the sole guarantee of Progress which generates Order. We can already feel the twentieth century totalitarianisms dawning on the horizon of contemporary history.

The process of isolation, abstraction and separation which was the prerequisite for the effective practice of modern science was in fact a process of conceptual alienation. The latter in turn became a human alienation based on a misconception of the fragmented Universe. It is not science that is wrong but those who practice it. (Skolimowski, 1992)

The whole question now is to know, since man replaced the soul of nature by nature-machine, who will be able to temporize his surge of power and domination which, without countermeasure, risks turning against him?

Naturphilosophy, associated with the Romantic movement in the 19th century, is the response to the mechanistic view of the world. From the teachings of archaic traditions, alchemist and occult practices, she takes up the feeling, the intuition of solidarity between man and the world. Rooted as much in mysticism as in poetry, the originality of naturphilosophy lies in the elaboration of a metaphysical concept which allows the union of East and West in the same system of thought, the same which will be at the origin of the hippie movement of the 1960s, a century later.

The romantic philosophers of nature consider nature like the Chinese Tao as a Whole whose dynamics are based on the play of opposites as in the I-Ching. Goethe called polarity this perpetual conflict of elements both opposed and united in their interaction. The diversity of living beings (the multiple) is the result of the diversification of a unique and original form which reflects the continuity and the increasing complexity of matter and of life.

"The absolute, as the ultimate foundation of all that is, is expressed both as Spirit (One) and as Nature (Multiple) : they express it in an equivalent way. Each of them manifests the constitutive polarity of the whole : subjectivity / objectivity, freedom / necessity, ideality / reality ". (cited by France Farago, op. cit., p.117)

According to Goethe, again in The Metamorphosis of Plants , "each of the forms generated by nature is a Gestalt (configuration) which, while being particular, differentiated from all the others, fully expresses the totality of which it is the manifestation". (cited by France Farago, Nature, Éditions Armand Colin, Paris, 2000, p.116)

The perception of unity is an inescapable premise that the philosophers of nature apply to the outside world, but which has its source in an entirely internal and properly spiritual experience : this starting point is that of the mystics of all times, it does not matter. their religious origin for which the primitive datum is divine unity, from which they feel excluded and where they aspire to return by way of mystical illumination. All romantic artists, all naturalist thinkers will explain that the process of terrestrial and cosmic becoming passes through a return to the lost unity. The march of life towards reintegration is inevitable, as is man's march towards rediscovered harmony.

The diversity of species, the complexity of natural structures are all opposed to fragmentation through cooperation. Nature is not divided, on the contrary it forms an extremely complex, dynamic and interactive whole. Diversity through crossbreeding. Preceding all written knowledge, animism showed great respect to all beings of nature, because all had a soul emanating from the Great Spirit that is the Universe. Rather than believing in determined spirits like angels, animism emphasizes an invigorating, mysterious, impersonal "power" present in everything. It is again important to specify that animism represents a force, a breath, a spirit, a logos present in everything. It is indeed an intimate relationship between man and the Universe, not to be confused with the collective totemism of archaic tribes where a thing, a plant, an animal, a being, are invested with supernatural powers for purposes social, cultural and political.

"Where is the life we lost while living?" (TS Eliot)

It will be up to Schelling to conceive the central theme of naturphilosophy and to "show how all differences are abolished within L'Absolu". In Introduction to the philosophy of mythology and in The Ages of the World , he rehabilitates the archaic myths of the Origins by describing them as a kind of unconsciousness of humanity : the collective unconscious so dear to Jung. Thus prehistory is the period when the inner movements of consciousness gave birth to myths as the beginnings of spirituality in direct relation with nature.

According to Jean Brun in Philosophy of history , the myth fulfilled a double function, firstly: "the expression of the creative and inventive power of man who would have projected into exemplary, warning, explanatory or consoling myths, fears or desires of a humanity confronted with an incomprehensible and threatening nature ". Second: "such myths, full of majesty and poetry, were precious witnesses of the human intellectual power which had known how to make of them true works of art characteristic of a culture and of an era, or the transpositions eternal psychological problems ". (Jean Brun, Philosophy of history, Éditions Stock, Paris, 1990, p.147)

Naturphilosophy, one suspects, will have a considerable influence on modern science because to reflect on the concept "Absolute / Nature", "Body / Spirit" is to participate in the knowledge of the world. It is wrong to oppose myth against science since history forms a whole which must be taken into account. Thus only knowledge which includes tradition and science can claim a "Knowledge founding all knowledge".

So at the start of the twentieth century, the modern gaze replaced primitive simplicity with scientific complexity. However, it is indeed the same nature, only the perception that we have of it changes.

Suddenly modern mathematics began to produce precise results that clashed with reality as perceived by our senses as non-Eucledean geometry. Results so spectacular that the great mathematician Cantor exclaimed in amazement: "I see it but I do not believe it" following his exploration of infinite magnitudes. These stimulating discoveries called for a new vision of mathematics, henceforth devoted to the development of postulates freed from any correspondence with reality. The pure abstraction of mathematics was being developed at the same time as abstract art. The modern equations of physics also joined the highest speculations of theology and abstract art, that is to say, all three became hermetic, incomprehensible to most laymen. However, the great historian Eric J. Hobsbawn did not hesitate to identify the twentieth century as that of mathematicians and sanctified physics as the undisputed queen of the sciences.

BRA

$$\langle\phi| = \begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix}_{\epsilon^*} = \begin{bmatrix} \phi_1 & \phi_2 & \cdots & \phi_N \end{bmatrix} \cdot \begin{bmatrix} \langle u_1| \\ \langle u_2| \\ \vdots \\ \langle u_N \end{bmatrix}$$

KET

$$|\psi\rangle = \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}_{\epsilon} = \begin{bmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{bmatrix} \cdot \begin{bmatrix} |u_1\rangle & |u_2\rangle & \cdots & |u_N\rangle \end{bmatrix}$$

$$\dim(\epsilon) = \dim(\epsilon^*) = N,$$

$$\langle\phi| = \sum_{n=1}^{N} \phi_n \cdot \langle u_n|,$$

$$|\psi\rangle = \sum_{n=1}^{N} \psi_n \cdot |u_n\rangle.$$

At the start of the 20th century, the view of physics developed since Galileo began to falter seriously. With quantum theory, Planck, whose major concern was a metaphysical research of the Absolute, laid the foundation stone of quantum mechanics by asserting that radiant energy has, like matter, a discontinuous structure; it can only exist in the form of grains or quanta. Thus light energy is at the same time material, formed by grains and immaterial by wave radiation. The quanta introduces a new concept beyond the particle / wave duality, that of the paradox of the quantum state.

$$\langle\phi|\psi\rangle = \left(\begin{pmatrix} \phi_1 \\ \phi_2 \\ \vdots \\ \phi_N \end{pmatrix}_{\epsilon^*}, \begin{pmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{pmatrix}_{\epsilon} \right) = \begin{bmatrix} \phi_1 & \phi_2 & \cdots & \phi_N \end{bmatrix} \cdot \begin{bmatrix} \psi_1 \\ \psi_2 \\ \vdots \\ \psi_N \end{bmatrix} = \sum_{n=1}^{N} \phi_n \cdot \psi_n$$

General relativity and quantum mechanics developed two physical theories, both indispensable but without logical connection. Thus the theory of relativity proposes a fusion of matter / energy, space / time particle / wave while quantum science, for its part, continued to auscultate matter until the improbable where the primary reality of the atom is neither there. neither the wave nor the particle, but "quantum states" which can simultaneously manifest in one or the other form. These "quantum states" produce specific configurations that Schrödinger succeeded, in 1926, in calculating and allowed, through his "quantum modulation" equations, to "see" the energy corresponding to each of them. (Éric J. Hobsbawm, The Age of Extremes, Complex Edition, Paris, 2000)

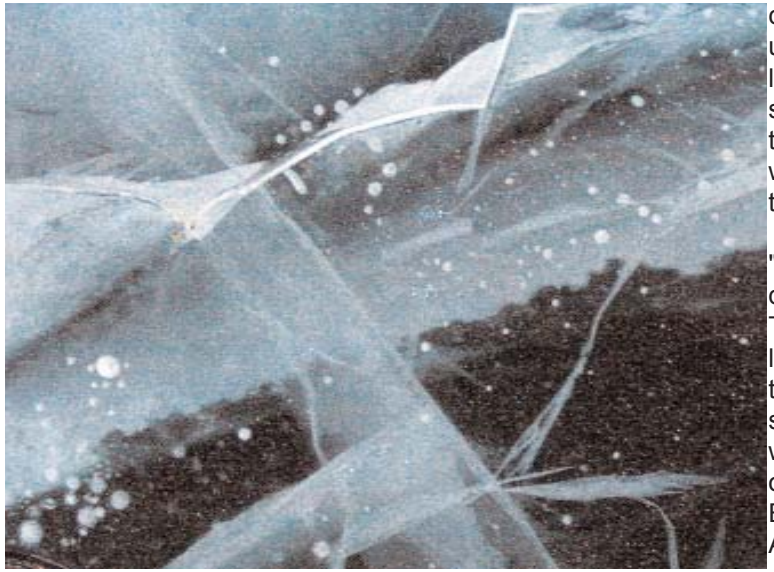
It is clear that the abandonment of Aristotle's logic because of the probabilistic nature of the measure has caused a stir in the scientific community. Von Neumann was one of the very first to write on quantum logic, followed by Mackey. What John von Neumann clearly showed, reflecting on the foundations of quantum mechanics, is that Newton's logic was at odds with quantum logic. It has taken a long time for the scientific community to take the plunge and ignore 2000 years of "traditional" logic; the proof of this is the number of decades it takes to write and rewrite on the "veil lifted" by quantum logic. The Einstein-Bohr controversy is also famous: for Einstein, "God does not play dice!", To which Bohr will respond: "Einstein, stop telling God what to do".

In 1911, Rutherford discovered the atomic nucleus, the first representation of which showed the electrons circulating around this nucleus much like our solar system. Experimental science became the big science of nuclear power. For want of knowing the Creator, man arrogated to himself the demiurgic right to destroy the initial creation.

From discovery to discovery, scientific "truths" like religious dogmas fall one after the other. Certainties are being taken to task. Historically, the "principle of uncertainty" was stated in 1927 by Heisenberg during the infancy of quantum mechanics. Because of its philosophical connotations, today physicists speak of relationships of uncertainty, or inequalities or incompleteness of Heisenberg.

The uncertainty theorem implies that at an elementary level, the physical Universe does not "live" in a phase space, but rather is conceived as a set of potential realizations, exactly determined in probability: the probabilities are, themselves, determined with absolute precision, provided the state of the system is pure. From the certainties developed since the 17th century, namely that electricity, magnetism and optics were governed by coherent laws, we plunge dizzily into the uncertainty that Heisenberg erected as a 'principle' namely that the mere fact of

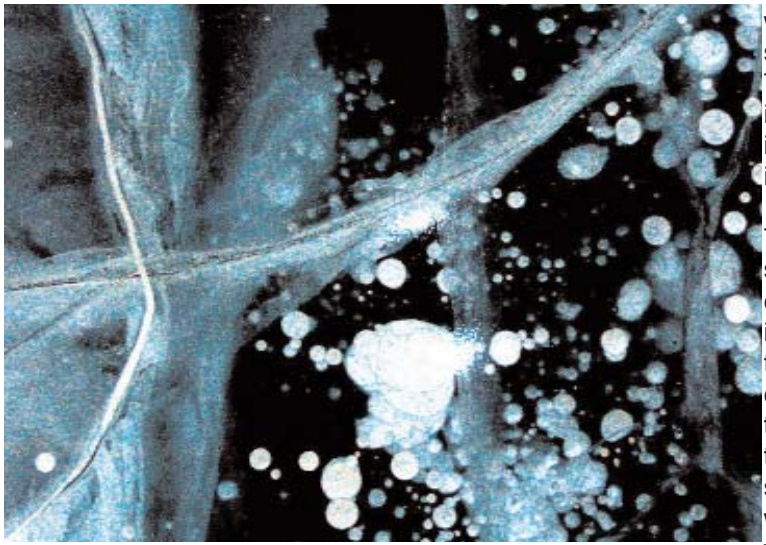
observing a particle affects phenomena at the subatomic level. Everything becomes random.



The new theory presented itself in the form of a vast set of mathematical probabilities which were beyond comprehension by means of the known and usual ideas of classical physics since Newton. To nature written in Galileo's mathematical language, Heisenberg replies: "nature is unpredictable". The particles can no longer be considered as defined elements on the contrary, they scramble and break up, shared in these two contradictory statuses, between the particle and the wave according to the gaze of the observer.

In short, reality, without an observer, is only a field of probability which is determined at the moment of observation. Before, nothing is real. We no longer observe nature "in itself" but nature left to our interrogation on what interests us. Just like the landscapes so totally transformed by man that everywhere we meet the structures of which he is the author, so man only encounters himself in nature. Knowledge of physics or of atoms "in itself" follows the same path. Quantum equations no longer describe nature but represent the knowledge we have of it ; radical break with the natural sciences as practiced for centuries. (Hilaire Cuny, Heisenberg and quantum mechanics, Éditions Seghers, Paris, 1966, p.169-175)

Paradox of incompleteness.



Life results from the general tendency of matter to organize systems creating order from disorder (Prigogine) whose movement is oriented from unity to diversity thus developing ever more complex structures where, paradoxical thought obliges , one is also everything.

From this perspective, elementary particles do not exist in themselves but only through the interactions they generate. This set of effects is similar to a vibratory field: everything we observe is part of a set of fields: electromagnetic field, gravitational field, proton field, electronic field. We leave the reality of the solid body to approach an immaterial ocean formed by waves and vibrations. Even Einstein, who was opposed to quantum theory, had nevertheless demonstrated that light, which was essentially believed to be a wave, was also composed of corpuscles, which were called photons. The light will be understood according to two concepts, lux and lumen: the first is the luminous substance itself, the second is its radiation. Light therefore has the quantum characteristic of being both a solid body and a wave. It will be up to the mathematician Kurt Gödel to demonstrate beyond any doubt:

"that with time, Reason will inevitably lead to contradictions, Reason always leads to de-Reason. (...) This spoilsport rigorously demonstrated that from linkages to logical linkages, Reason inevitably runs to its loss, because it will end up by successively stating two theorems in perfect contradiction one with the other, like for example saying that the same object is at the same time white and black ". (Jean E. Charon, The whole, the spirit, the matter, Editions Albin Michel, Paris 1987, p. 203-204)

This illogicality of the object, which is both white and black, is it not the same as we find in light, which is both corpuscular and undulatory. Is there nothing more contradictory? One is localized, the corpuscle, the other extent, the wave. There is a lot of mystery below. So much so that "our reason has limits" (Kant).

PARADOX

The incompleteness theorems show that it is no longer possible to give a finite and formalized list of all the principles from which we can develop a mathematical proof. We can always imagine going beyond what is allowed by the axioms. These theorems show that the imagination goes beyond all frames. These theorems demonstrate the power of the imagination and the capacity of reason to recognize its limits, to recognize its inability to enclose the imagination within limits fixed once and for all.

The new theory presented itself in the form of a vast set of mathematical probabilities which escaped comprehension by means of the known and usual ideas of classical physics since Newton. It will be for the physicist Neils Bohr to state the principle of complementarity which wants that henceforth "the two aspects, corpuscular and undulatory, either particles in movement or radiations, are forms of the same reality." In other words, the solid body and the wave of light are complementary to a phenomenon whose real characteristics escape us. Science has just written its first "act of faith".

So far there are indeed two incomplete ways of approaching the Universe:

Reason and Intuition. We can even say that Intuition comes to the aid of Reason that has broken down, as if in order to "know" the Universe, our consciousness also asks us to "feel" the Universe. We then think of two logical systems which clash when it is not, on the contrary: the paradoxical language of Intuition versus Reason takes nothing away from knowledge. The image of the Universe provided as much by Intuition (primordial sensation) as by Reason (primordial information) brings about an elevation of consciousness towards Unity.

The mind is constantly active in the perception, because it structures it. A constant work of identification is at work within the perception in the waking state where vigilance is essential to the anticipation of a unique and coherent perceptual world.

"Consciousness is essentially activity, because it is intentional act. Consciousness does not cease to be consciousness, it remains so in each of its states and perception is no exception. It is an aim of the subject towards the object, it is not only a kind of "stimulus" affecting the individual. Without consciousness, the " object " is not, for there is no object except in relation to a subject. Without consciousness there is no thing. What the thing can be is that consciousness could have constituted the identical within the perceptual experience ". (Serge Carfantan, Philosophy and spirituality, lesson 14 , http://serge-car.club.fr)

It is the very act of observation and the awareness that it entails that concretizes reality, the matter observed. Objective reality does not exist ; any decision to observe implies a subjective decision of the spectator towards only part of reality, our gaze is discriminatory in the sense that we see what we want to see.

"You never see an object (or an event) except in a certain context. This context is made up not only of the global scene in which the object seen is immersed, but also of the state in which the brain of the one who sees when he sees is located. This internal context depends on many factors : what has been seen, long ago or not, what we expect to see, what we fear to see, the state of motivation, vigilance, emotion of the perceiving organism as a whole, etc. The brain is never at rest, it constantly maintains a model of the world in which it is engaged ; this model is syntactic, in the sense that it governs the rules which associate the sensory elements received with the behavioral expressions emitted. Therefore, we could consider how, despite the poverty of the stimulus, visual perception can be so rich : what the retina provides us are only partial beginnings of a visual scene that the brain is able to complete with it. -even. Many theorists have insisted on the fact that we only see what we can do something about ; it might be this something to do or to contemplate that would give the brain the illusion that it sees as it imagines ". (Michel Imbert, The vision today in La lumière, art et science, Éditions Odile Jacob, Paris, 2005, p.318-319)

The color scheme gives us a good example. Each color of the light spectrum has its own wavelength, a sort of so-called "objective" reality. But a color is also a sensation perceived by our eye, it is therefore dependent on our visual organ. Thus the sun emits white light and yet it visually appears yellow to us. The fact that it emits white light, made up of all the colors of the rainbow, and that it visually appears yellow to us is explained by the fact that the sky is blue: the mixture of gases constituting the terrestrial atmosphere diffuses, in all directions, the part of the solar spectrum located in the blue. In the sunlight that reaches our eye directly, the radiations corresponding to the color blue are absent, so the sun appears yellow (visual mixture of the radiations corresponding to the colors green and red).

In addition, it happens that the interaction of wavelengths is so "disconcerting" that finally our eye interprets this sensation by creating itself new colors which do not exist in the spectrum. This is the case with the color purple which is not a color of the rainbow or of the spectrum because no wavelength corresponds to it. Purple is an "intuitive" color, a pure creation of our brain, master of illusion. The chemistry of colors, from the beginning of the 20th century, introduced new chromatic values to make hundreds of colors unusual in nature. To achieve this, the chemist plays with molecules vis-à-vis the light like the pianist on his keyboard. As previously suggested by Newton, the seven notes of the scale merge the seven colors of the rainbow. Subjected to the wavelength of light, the molecules resonate like the strings of the piano subjected to the length of a vibration, there are as many possibilities of colors and arrangement as there are possibilities of symphonies. This analogy can indeed help us understand the intricacies of string theory even better. (Zuppiroli / Bussac, The Treaty of Colors, Presses polytechniques et universitaire romandes, Lausanne, 2001, p. 94 and 150)

What quantum theory of light teaches us is that observable reality is a game of consciousness with consciousness, that matter, consciousness and spirit form one and the same Totality. But even more, the Universe only exists if it is thought out and its representation will depend on the postulates and the knowledge that we have acquired, on our "memory points". ONE, a thought. Let us put in relation four propositions separated by more than two centuries. Parmenides, already in 515 before JC, affirmed that : "Without thought, the Universe would not exist". Subsequently in 1560, Descartes formulated his "I think therefore I am". In 1927, thought as "the flower of evolution" by theologian Teilhard de Chardin followed, and finally, "To exist is to be thought" by physicist Jean-Émile Charon (1970).
In this regard, the discovery of the planet Neptune by Urbain le Verrier in 1846 is premonitory of the relationship between thought and intuition. The French astronomer discovered the planet not by looking through a telescope but by imagining it. He thought of the need for the existence of other planets in our solar system. Following a mathematical calculation of probability, he deduced that a planet must exist at a specific location in the Universe. He then sent to a German observatory perfected his calculations and the astronomical coordinates of this imaginary planet. The observatory's optical instruments confirmed its presence, its discovery at the precise location imagined by the scientist. Neptune was discovered by thought through intuition. The alliance between intuition and reason subsequently led to the science of probability and the emergence of quantum equations. Except that from equations to equations,

physicists have stumbled upon the inexplicable. More and more, quantum logic realizes that there exist in the Universe attributes that are potentially observable but which have such a sum of paradigms that they are incalculable.

"Strive with all your strength, to rediscover the primordial Unity of Matter and Spirit". (Lao-Tzu)

The Universe would therefore be formed of elements which all contain the primordial information just as a cell contains all the genetic program of an individual, like a hologram, contains everything in each part. This is because each part of a holographic negative contains the entire image. So if I tear up the negative to keep only a tiny part, it will still contain the entire image. Another example, each digital image is made up of millions of pixels, now imagine that each pixel contains the entire image while being distinct to understand that each rock, each animal, plant, molecule, atom in the Universe has the configuration from the whole. Let us name "God" this primordial information present in every particle of the Universe and you will understand that "God is everywhere" present of course in all living beings as well as in the inorganic world as "principle of all natural production whatever it is. gender and price, principle of the seed of forms and of the movement of seeds and forms ... "(Saint-Augustin)

God is multiple, the One is plural. Polytheism from here below is identical to monotheism from above. This was the animist view of the archaic peoples. All beings are part of the Oneness.

"The philosopher and the spiritual, the primitive man and the civilized, the most personal thinker and the most humble believer, the prophet and the mystic do not converge only on one word when they each say : God. When everyone's orientation is right,… they actually meet, or at least they tend to actually meet - even though the object each is thinking about is apparently dissimilar. In truth, God is unique. God of intelligence and God of conscience - God of supernatural revelation and God of reason - God of nature and God of history - God of being and God of value - God of reflection and God of prayer - God of the philosopher and God of the mystic,… how many oppositions and what unity ! Unique God with multiple aspects, unique term with multiple approaches ! God of all myself ! God of all ! (Henri de Lubac, On the paths of God, 3 e ed. Aubier, Paris, 1956, p.135-136)

It took us twenty-five centuries of Western philosophy and scientific method to understand the metaphysical respect for all living beings by primitive peoples. Modernity will therefore have created plagues "which arise from man's claim to acquire superhuman knowledge in the name of which he becomes inclined to exercise over others an omnipotence that does not suffer from being discussed." (Jean Brun)

So it was with the archaic peoples: instead of listening to them, we eliminated them. The collective gods of ancient religions associated with notions of peoples, nations and territories, whether polytheistic or monotheistic, are identity signs of a cultural and political nature. Spiritually speaking, they are conceptual errors and as the ethnologist de Brosse pointed out : "it would have been great if the cat worshipers lived in good harmony with the rat worshipers". On the other hand, in primitive societies, God has no political or cultural identity. God only exists in relation to the "I" himself in relation to the community and the meaning of his whole life lies in his effort to find his place and to be inserted in the totality of which he is an element. Instead of bringing everything together, rationally amalgamating into a single god fighting against the other pagan gods, our Australopithecus ancestors had intuitively felt that all forms of biodiversity naturally converge towards the ONE and that all manifestations of God in matter , beings and forms, its "theodiversity" deserve to be respected.

"I abdicated duality, I saw that the two worlds are one. It is the One that I seek, One that I contemplate. One that I call. He is the first, he is the last, the most exterior, the most interior. I know nothing other than "O him" and "O him who is". (Rûmi, Diwân (extract) in Le livre des Sagesses, Éditions Bayard, Paris, 2002, p.1584)

Our destiny is self-poietic.

It was during the Renaissance that finally, timidly certain animist precepts appeared again from the Corpus Hermeticum , a Latin translation of an ancient Greco-Egyptian philosophy, originating in Alexandria. This time, an ancient cosmology, linked to metaphysics and Greco-Roman philosophy largely inspired by the speculations of Arab alchemists, forms a completely new body of texts. In short, all the "naturalism" excluded from biblical monotheisms was coming back in force to the fringes of both theology and science. Although hermetism, a philosophy named in honor of Hermes Trismegistus, dates from the beginning of the Christian era, it will be known in the Christian West only in the 15th century after having passed through the Arab editions of the 10th century. Among his writings, we note :

"Truly, certainly and without doubt, all that is below is like what is above, and all that is above is like what is below, in order to perform miracles. of one thing. Thus all things proceed from the Unique by mediation of the Unique, from which they are born by adaptation. His father is the sun and his mother the moon. The wind carried him in his body. His nurse is the earth. (…) The microcosm is created according to the prototype of the macrocosm. For this and in this way wonderful applications are made ".

From these principles enunciated by Hermes, let us retain that there is reciprocity between the forms of nature (below) and the realities of the spiritual, cosmic world. From the One origin the many. As in Chinese yin and yang, two complementary principles, the sun and the moon, are the progenitors of beings and things in correspondence with the qualities of the microcosm and the macrocosm. This vision of the natural order will be at the origin of most of the protests, mainly by artists and poets of the time, against mechanization, the industrialization resulting from the Scientific Revolution. Moreover, we feel in Goethe a strong influence of hermeticism.

"Each of the forms generated by nature is a Gestalt (configuration) which while being particular, differentiated from all the others, fully expresses the totality of

which it is the manifestation". (Goethe, The Metamorphosis of Plants, cited by France Farago, La Nature, Éditions Armand Colin, Paris, 2000)

Goethe called "polarity" this perpetual conflict of elements both opposed and united in their interaction. The diversity of living beings (the multiple) is the result of the diversification of a unique and original form which reflects the continuity and the increasing complexity of matter and of life.

This observation of a new feeling for life, nature, the world and God is above all indebted to a great philosopher, Benoît de Spinoza (1632-1677), long insulted by the intelligentsia of his time. The only book published during his lifetime, the Theologico-Political Treatise marks the first modern critique of the Bible . The God of Spinoza is not a transcendent god separated from the Universe, on the contrary, "God is in the world and the world in God". But beware ! God is not the Creator of the terrestrial world in the biblical sense, he is even greater. For this marginal Jew, friend of Rembrandt, the terrestrial world is only a way of existing of God, one world among many others which quantum mechanics explores today under the formulation of "parallel worlds". With Spinoza, we are necessarily in the presence of a cosmic God of the Whole and of the Multiple in the One, an apparently contradictory idea strongly challenged and opposed by Catholics, Jews, Muslims, great fervent of the biblical tribal God, who rejected all antinomy.

General hubbub in 1928, when Paul Dirac proposed his equations demonstrating the existence of antimatter. Antimatter designates a kind of matter where particles are replaced by their antiparticles. An anti-hydrogen atom, for example, is made up of a negatively charged anti-proton around which a positively-charged anti-electron called a "positron" or "positron" orbits. The dispersion of antimatter created at the same time as matter according to the big bang theory remains a mystery, but it is certain that without it we would never have existed.

Kant, the first, tried to elucidate the mystery of the apparent oppositions (single / multiple, matter / antimatter, etc.) by transposing into philosophy the principle of "negative magnitude" recognized in mathematics. To the logical contradiction that a body cannot be both at rest and in motion, Kant introduces the concept of real opposition where "two predicates of a subject are opposed but without contradiction." Thus a moving body subjected to two equal driving forces but in opposite directions which cancel each other out, will be at "rest", like a boat which seems immobilized by the force of the tide contrary to its course. Thus the contradiction of unity versus the multiple is not necessarily synonymous with logical philosophical opposition. Of course, this concept of polarity once again refers to the famous Chinese yin / yang synonymous with the complementarity of opposites. These concepts born from the flourishing intuition of their author were finally confirmed in 1928 by the appalling discovery of antimatter by Paul Dirac.

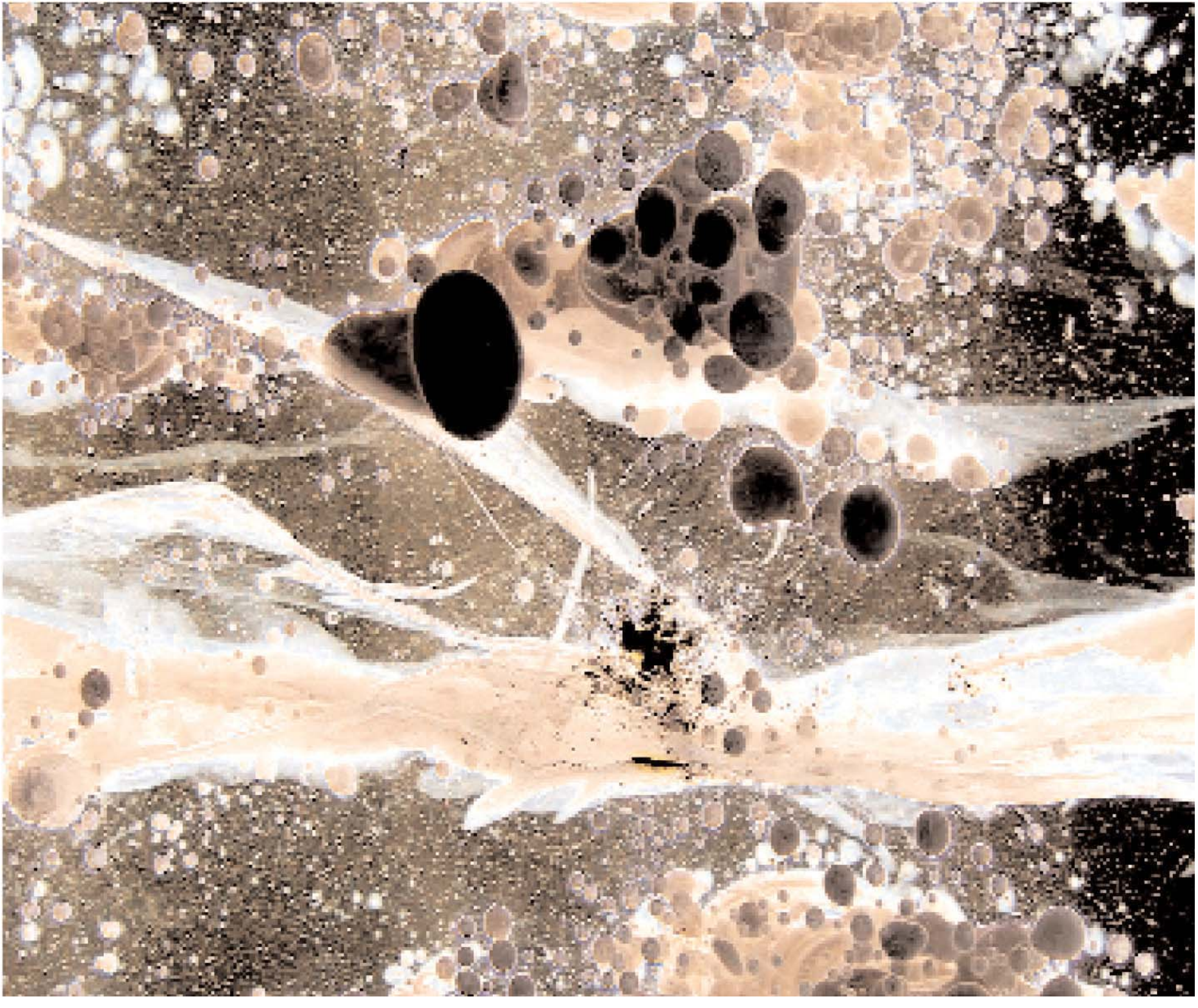
Each particle has a cumulative memory and its behavior increases as it crosses thresholds and levels. What you have to understand is that all the particles in the Universe have a set of symbols at their disposal, some particles will be high definitions others low a bit like the number of resolution points on a screen of high definition TV versus a standard screen. It will be up to the mathematician and physicist Louis de Broglie to formulate that each particle has a "look" towards the outside called "psi wave" coupled to an internal memory called "sigma field" which allow a choice of behaviors according to the set of symbols that 'she disposes; this choice is therefore based on "memory points". Subsequently, Bell's theorem predicts that a particle is able to immediately register the change of state of another particle several light years away.

The clever broglian calculations (fusion of spin particles) allowed physicists to have a new look at matter. Thus the mineral world would have a set of 256 memory positions, the plant, the next level, with its 65, 536 positions, the animal with its 4 billion memory positions, the human being with its 18 billion billion positions memory and the next step will be an entity with 340 billion, billions of billions of billions of memory locations. (Charon, The All, Matter, Spirit, 1987)

If we place ourselves at the level of elementary particles and at the atomic level, we see that stone, flower and whitewash are identical. It is only at the level of molecules that important differences appear at the level of the differences in matter between the mineral world and the organic world. Thus the whitecoat appears to be much more structured than the flower and the flower more than the stone. The fundamental difference between "inert" and the living is quite simply that one is richer in information than the other and within the living world, the species themselves all have almost identical informational baggage. some inconvenience near.

Life is therefore matter better informed than inert, characterized by its evolution and there is indeed a continuous passage from inorganic matter to life as observed on stromatolites, these stones which are called "bioconstructors". ". These are rocks enveloped in a thin layer of microscopic bacteria that make up the living part of the rock. Stromatolites are therefore organo-sedimentary structures depositing the first manifestations of life on earth. We will then speak of "self-organized criticality": from a critical development threshold, a system tends to spontaneously reach a higher level of organization or performance in a more complex mode. We are talking about emerging properties here. This development can take place either without transition or through a "chaotic" phase, like a kind of indecision. These ultimately become observable when they go in the direction of a new organization.

Richard Buckminster Fuller proposed to name " synergy " the combination of several functions ensuring the emergence of a single distinct function. Synergy (from the Greek synergos meaning "to work together") refers to the phenomenon in which several factors or influences acting together create an effect greater than the sum of the effects expected if they had operated independently. The Chilean researchers Maturana and Varela transposed the synergistic phenomenon to biology which they designated under the term "autopoiesis" (Greek auto (oneself), and poiesis (production, creation). It defines the property of a system to be to produce itself and to maintain itself, to define itself. Henri Atlan, in an Interview in the newspaper Le Monde dated 19 November 1991, declares that the idea of self-organization "corresponds very broadly to the hypothesis of a program which would program itself.



The example of an auto poietic system is the biological cell. The cell is made up of various biochemical components, such as nucleic acids and proteins, and is organized in limited structures such as the cell nucleus, various organelles, a cell membrane, and the cytoskeleton. These structures based on an external flow of molecules and energy "produce" the components which, in turn, continue to maintain the contained structure, allowing the growth of these components. The first forms of life, probably bacteria, would have appeared almost 3.5 billion years ago. 600 million years ago, organisms with flat bodies, algae and vegetable mosses appear followed by scorpions, spiders and crustaceans. Around 360 million years ago, the eusthenopteron foordi, the famous fossil fish discovered in Miguasha in Gaspésie (www.pc.ca/miguasha) possessing terrestrial respiration and being able to crawl, undertakes the difficult and perilous exit of the water and found in a totally different environment where ferns, among others, reach more than 30 meters in height. The continental drift has only just started. All the continents are united in a compact mass under the equator. Even more incredible, in addition to breathing, our first ancestor moves by relying on articulated bones (our current limbs, legs and forearms).

Yes, man is descended from fish and evolution over several million years became more complex: amphibians, dinosaurs, birds, primates (50 million years ago) and finally the arboreal Australopithecus (5 million years ago) . years) our primate ancestor followed by Homo erectus (one million years) and Neanderthals (300,000 years) and finally Homo sapiens, our immediate 40,000 year old ancestor. According to André Bourguignon in The Unexpected Man : "the self-organization of matter in various and ever more complex forms has been achieved by random oscillations, trials and errors, trial and error, trial and error, around an axis oriented in time. , whose two ends are represented by a single entity : originally the simplest chemical species, the hydrogen atom; at present the most complex animal structure, Man ". (in Natural history of man, The unexpected man, tome 1, PUF, Paris. 1989, p.299)

Thus emerges an unavoidable constant, the goal of life is to increase the Consciousness of living things and each cell continually exchanges information with its environment to increase its "memory points". The construction of the human brain whose 10 13 neurons once deployed in the cerebral connective are connected by 10 15 synapses constitutes a performance which defies all imagination. Following the Broglian theorem, it goes without saying that henceforth, creation and evolution go hand in hand. At the present state of our knowledge, the big bang appears as a rupture, a sudden creation characterized by the evolution of information in matter until the appearance of life. Then this stock of information did not stop growing and for millions of years, our brain was constituted thanks to the exponential volume of cultural and technical information acquired through practice and transmitted through tradition.

Creation and evolution are then presented as two infinities : the Universe as infinite magnitude and the nature of our terrestrial world as infinite of possible temporal forms and diversity of living things. Two seemingly contradictory universes yet united within a single totality : "vital impetus" and "creative evolution" forming a Whole itself in "continuous creation of unforeseeable novelties". (Bergson, Creative evolution in Œuvres, PUF, Paris, 1959, p.1331).

This "continuous creation of unpredictable novelties" prompted Hegel, previously, to think of a philosophy of history beyond that of man, it becomes the history of God lived through nature, time and men. . This history of the Absolute is a "permanent revelation" by which the Being attends the generation of the Absolute in the history of the World; what Hegel called "phenomenology" that is to say "the Spirit itself in the process of" phenomenolizing ", of constituting itself as a phenomenon. (Hegel G., The Phenomenology of Spirit, Éditions Aubier, Paris, 1939)

Finally, the whole of the Work, our Universe is self-generation of the Absolute revealed by the knowledge of its history. In short, dynamic, in eternal movement, God like his work, like our Universe in eternal process of continuous creation confines us to the permanent learning of a perpetual increasing information (negentropy), such is the infinite.

Twenty years later, Bergson's brilliant intuition of the evolution / continuous creation of the Universe forming one and the same negentropic system will be strongly ennobled by the appalling discovery (1929) of Edwin Hubble on the expansion of the Universe. When the now famous astronomer had established that the spatial shift of galaxies towards the red was proportional to their distance, it was necessary to admit the most astonishing of the obvious facts: the Universe is always exploding, expanding like a "program which programs itself ", in the process of" phenomenolizing "itself from the big bang, to use Hegel's expression.

The American writer Doctorow has clearly identified the problem of the big bang : Can we really speak of an explosion when there is no existing framework ? Isn't the exponential expansion of the Universe from an inframicroscopic point rather a sign of the collapse of the original core of space-time on itself, an implosion that released a cloud of gas, particles, of light in perpetual creation of itself. Explosion or implosion, we may never know.

"There was something indeterminate
before the birth of the Universe (…)
Not knowing his name,
I call it "TAO"
(Lao-Tzu)

In this sense, Tao, Allah Yahweh or God like all the gods of the earth, each of these divine entities is unanticipable, that is to say that they must be poetized as a dynamic and continuous creation in perpetual change. Even more, spiritualism (spirit) and naturalism (body) form one and the same "system". Thus the Universe is the continuous creation of primordial information, of the order of the spirit materialized in the living as primordial sensation, the order of nature.

Thus, as Pascal thought, nature as "infinite in flesh and blood" is "spirit in action" and man, both body and spirit, because free and conscious is capable of progressing indefinitely in the field. infinity of knowledge. Man will never be

outside nature since the essence of nature is at the heart of man ; nature, like man, is incomplete. (Conche Marcel, Philosopher à l'Infini, PUF, Paris, 2005, p. 130-161)

"From nature, Anaximander has already seen the essential : that it is unfinished. It is "the infinite" (to apeiron) : an infinity in a sense closed on itself and without exterior, since there is only her, but nevertheless an open infinity, since she is nothing. other than continuous creation. It is the genitor of innumerable worlds, both coexisting - since they are "in infinite number, in the infinite, on whatever side one turns" (Vors. 12 to 17) - and successive and succeeding each other in the infinite time, some begotten, others destroyed : and this cannot have an end, says Aristotle (explaining Anaximander's position), "because the generations and the destruction of the worlds necessarily presuppose the movement, which will always exist". (Phys., VIII 1, 250b 20-21 in Conche, 2005, op. Cit. P.160)

In short, the evolution of the Universe, of nature including ours, is not over. Bergson's Creative Evolution published in 1907 demonstrates that creation is not synonymous with beginning but with continuity. We are in the process of becoming self-poietic, carried along by a perpetual movement of creation.

"It is no longer an earthly problem, or only an earthly problem. We are dealing with processes of increasing complexity, memorization, integration, which one finds absolutely everywhere, and at all times; at the origin of life, throughout the evolution of life, but also before life. We can go back as far as we want: there are no atoms if we do not integrate the quarks; there are no molecules if there is not the diversity of atoms, and the integration of these atoms into more complex structures; there is no single cell stage if there is no diversity and integration of complex molecules, RNA, DNA, enzymes, etc.

To put it briefly, the omnipresent process in the Universe, both inert and living, is the integration of diversities into a dynamic structure which has the genius of being able to generate the memory of its own construction. It is absolutely fabulous! However, we ourselves fall under this logic which consists in reintegrating an old memory. No doubt evolution also requires a diversity of memories. Two or more memories meet, fertilize and integrate, recognize each other in their diversity, and a new memory can then emerge.

This story is therefore not terrestrial. It is much deeper, and I believe we have to go to the end: it is directly linked to the initial conditions of existence, to the initial conditions of this process of integration of increasing complexity, and finally to what happened at the origins of the Universe. " (Anne Dambricourt-Malassé, Researcher at the CNRS / Institute of human paleontology - prehistory laboratory of the National Museum of Natural History. Interview, ideas and souls, no: 8. www.leshumains-associes.org)

Thus this diversity of levels of consciousness common to all species down to the smallest particles therefore forms a Unit specific to the entire Universe. This "dynamic structure which has the genius of being able to generate the memory of its own construction" also finds its raison d'être in Christian theology. It was indeed the father of the Anathase Church of Alexandria who, long before De Broglie's "points of memory", sixteen centuries earlier to be precise, developed the argument in favor of an intentional genetic code of the spirit, a sort of logoi spermatikoi translated into French as "seminal reasons ". Anathase completed the analysis of this force by attributing to it a dynamism (dynamis spermatika) responsible for the factors of development of matter.

"These logoi spermatikoi or" seminal reasons "are individual and concrete participations of the great divine Logos, simple expressions and particular realizations of the thought and the intentions of the Craftsman of the Universe, which brings together all the beings of the Cosmos in one great divine conception which obviously has its plan, its logic and its organic dynamism. " (Bertrand Guy-Marie, Cosmic Revelation in Western Thought, Éditions Fides, Montreal, 1993, p.218)

It will be up to the philosopher of nature Von der Weltseele to conclude in these terms: "nature is the visible spirit, the spirit, the invisible nature", such is the "soul of the world".

All thought is contingent on a metaphysical premise including scientific logic. Everything is language, the atom, like the letters of the alphabet, is the language of the Universe (Leucippe), the Universe is musical language (Pythagoras and Kepler), the Universe is mathematical language (Copernicus, Galileo and Einstein). In fact all join the metaphysical aims of Anaxagoras (610-547 BC) who then proposed intelligence as a principle and organizing force of the Universe that quantum physics describes as "primordial information". Thus this diversity of levels of consciousness common to all species down to the smallest particles therefore forms a Unit specific to the entire Universe. We can take this word from Plato : "nature is an enigmatic poetics (poesis)".

For not only is nature alive but man also has the particular faculty thanks to the logos to transmute the knowledge of life into a spiritual experience; what the Theosophist Joseph de Maistre called "the Revelation of the Revelation."

Thus Einstein pleaded in favor of a "cosmic religiosity" to which corresponds "no idea of a God analogous to man"; a cosmic religiosity without dogma, without Church, without caste of priests. Certainly, because this religiosity is inescapable; the more science apprehends the limits of the Universe, the more its representation escapes the rational and takes refuge in metaphor and poetry, which the famous physicist Werner Heisenberg illustrated in these terms: "We certainly end up succeeding in understand the world, by presenting its order structures in mathematical forms; but when we want to talk about it, we have to be content with metaphors and parables, almost as in religious language. "

Should we be surprised then by the statement of the physicist Niels Bohr according to which the Asian symbol of Yin-Yang played a primordial role in the formulation of his theorem on the law of wave-particle complementarity while his colleague Capra publishes his best- seller under the revealing title The Tao

of Physics and Edwin Schrödinger, The Veda of a Physicist.

Now it remains to decode and understand how uniqueness can be multiple at the same time? Morphological theories (science of forms) will come to our aid. With these we leave the quantum world of the infinitely small (the millionth of a millionth of a centimeter) and the world of relativity of the infinitely large (a million billion billion billion kilometers or 1 followed by 24 zeros, ie the dimension of the Universe today observable.) to fall back with both feet on the ground and approach the world around us, our daily life.

We can safely say that morphological theories can be considered as the philosophy of nature of modern times by shedding innovative light on the situation of man in the world, his relationship to things and to himself. We leave the galactic colds of pure rationality to approach the world of sensitive qualities, the warmth of colors, the shimmering of shapes, the undulating movements of matter, in short, the world where we live, where we smell the scents of life. and feel its poetry. From the world to our scale, all you have to do is open your eyes to perceive the richness of a complex and multiple nature where everything is intertwined.

The immense variety of forms in nature comes from the modeling and remodeling of a small number of fundamental forms whose spiral, meander, ramifications and yet from these "fundamentals" hatch a whole panoply of subtle differences. The variety of forms arises from strangely limited primary structures.

"But when you see how much the ramifications of a tree resemble those of arteries or rivers, how much the crystals resemble soap bubbles and the plates of a turtle shell, how the spirals of fiddleheads and those of galaxies resemble the whirlpools of an emptying bathtub, one cannot help but wonder why nature only uses a few related forms in such different contexts? (Stevens Peter S., Forms in Nature, Éditions du Seuil, Paris, 1978, p.1)

True ! But are the Universe, nature, space and their seemingly elementary structures that simple? If there is limitation, does it not come from the observer? Because indeed, modern physics since the relativity of Einstein and quantum mechanics of Planck with their coherent mathematical descriptions have shown us the probability that there are in the Universe other spaces where structures and forms are not there. same as in ours. In order to better understand the concept of a single universe and multiple spaces, let's take the example of the chrysalis which becomes a butterfly. This butterfly is not a new being (another universe) but the same being that has changed and shows a disposition intrinsically understood in its genetic system. Multiple spaces are part of the provisions of the "genetic" system of the Universe. They are present there but just as invisible as the chrysalis in the butterfly can be for us. The butterfly (our reality) hides the chrysalis and vice versa, so that for the observer, the butterfly, even if it presents itself as a total reality, is however only one possible perspective.

In this "world of flesh", evolution continually brings about the emergence of new states of matter. The astonishing and abundant variety of forms describes, each in their own way, a nature with ramifications of rare complexity. Like the quantum universe, the forms are in perpetual expansion and, during, change while passing by a series of distinct states, it is a world populated by corpuscular and undulating matters able to innovate and which weave between them correspondences incredible, a real "work in progress". The more the perception multiplies the perspectives, the better it grasps the "truth" of the object. This is exactly what we have tried to represent in the following pages where the same reality is presented from another perspective so different that our brain wonders if they both represent the same entity.

However, the evolution of forms obeys specific laws distinct from those which act on matter. Indeed, the figure of a form has no magnitude, no length, no speed, no volume, no temperature, no mass; in short, we cannot quantify it. The shape of a thing is an elusive reality that we cannot hold, take, weigh; the shape of a thing can only be perceived. It requires an intellectual disposition which favors contemplation and is akin to a more "spiritual" science.

So that : "in nature, conditions are never quite simple, and any 'elementary' or 'isolated' object is part of a larger system, which in turn operates within it. other even larger systems. (…) The warning is clear : nature never exactly conforms to our simple models. " (Stevens, op. Cit., P.44)

We would therefore be in the presence here also of a "logos" regulating and ordering the overall development of the forms of the organisms and the different parts composing them. It is a global morphogenetic field (Thom) which governs the various peculiarities of each organism. Thus all the objects of our world each have a singular form obeying the specific "laws" of a global field governing all possible and, by the same token, infinite probabilities.

Thus all the great sets of matter, from the infinitely small to the infinitely large, all the great families of living things, plant, animal, human, all sets of forms respond to an internal logic which forms an ordered Whole. Man no longer imposes his law on reality, having come down from his pedestal, he is now part of nature whose diversity he knows. He is a living person who must "harmonize his individual action with the action of all other living beings so as to preserve the life of the other and ensure the perpetuation of the entire Living phenomenon."

"The Living One forms a vast network throughout the Universe and that, at least generally, and for what we perceive, everything is held together and helps each other in Nature, the Living being based on the Living which is next to it or that precedes it to feed itself and ensure the survival of its offspring: the plant feeds on the mineral, like the animal from the plant and the human from the animal. " (Charon, The All, Spirit, Matter, p. 107)

"Nature is not made for us, it is not delivered to our thought" (Prigogine-Stengers)

According to anthropic thought, the world exists only to satisfy the needs of man, even more than it was created for man. Well no ! Evolution follows its

course inexorably and know that if the event of a giant asteroid that fell to the earth 65 million years ago had not happened, well, it is a safe bet that the human 'would not exist and that the earth would still be under the reign of dinosaurs so well they were adapted to the environment and their brains might have climbed the ranks of "memory points" necessary for consciousness. Nature is therefore not a system of rigid laws that can be manipulated at the whim of man but rather a set of forms over which we have very little control. Life results from the general tendency of matter to organize systems creating order from disorder (Prigogine) whose movement is oriented from unity to diversity thus developing ever more complex structures where, paradoxical thought obliges , one is also everything. Like the hologram where the whole and the parts are one and the same, the One and the variety of forms express one and the same reality. One is multiple, the multiple leads the One to All and vice versa.

All liberation is chaotic.

Physical science is based on the premise that the Universe has laws, and its whole ambition is to find them. From this point of view, there is therefore no disordered system: all systems all have an order, laws that describe them. On the other hand, it is quite obvious to all that there are "complicated" systems, endowed with too many factors to be able to take them all into account and make precise prediction calculations. These systems appear messy.

Chaos theory demonstrates the existence of particular combinations of order and disorder, measures this degree of irregularity through fractional geometry and uses the computer to represent the fractal image of chaos. All sciences are concerned, to respond to Plato's intuition reformulated by James Gleick: "(...) behind the visible and particular forms of matter must hide ghostly forms which serve as their invisible model." So much so that the disorder of matter, of forms, of the world is only apparent disorder. It is only after the fact, that after the storm, that one can see that the evolutionary development is perfectly coherent. The regulation of the system brings us back to auto poïeis.

"There was light and order was freed from disorder".

This famous verse by Milton inspired by Genesis inevitably brings us back to Prigogine's work on chaos. It was he who overturned the famous principle of thermodynamics that "the Universe is in perpetual struggle against the irresistible rise of disorder." On the contrary, he demonstrated that life is nothing other than the history of an increasingly higher and more complex order underlying the apparent chaos of matter. Chaos being only a necessary and transitory instability towards order. thus confirming Zermelo's theorem is that any system comprises choice relations which allow it to be well ordered.

Since Prigogine's statements, we have witnessed a "re-enchantment" of the world, a "resacralization" of nature marked by a new discourse which "rationally" reformulates the old cosmologies which have managed to preserve the links which unite the living to the Universe, earth to heaven, man to the cosmos.

According to traditional physics, there is an irreversible process in the cosmos called entropy which involves an ever increasing process of disorder. The entropy defined by the degree of disorder increases irreversibly. Prigogine's work on chaos demonstrated that on the contrary, the irreversibility of entropy is possible. Once again we must appeal to paradoxical thinking, according to Prigogine "non-equilibrium is the source of order; chaos produces order. "

So growing disorder implies the creation of a new order. One could even think, theologically speaking, that Prigogine solves the famous fight of the Sons of Light against the forces of Darkness, so dear to Zarathustra. Philosophically, one can even argue that the question of evil as disorder arises only in periods of chaos as the absence of good. We are thinking here of Seneca who writes in one of these Letters to Lucilius: "What is Good? Knowledge of reality. What is Evil, its ignorance". This ignorance of reality can lead the free being to turn this freedom against himself. This is exactly what we are faced with. Humanity's ability to reproduce as a socio-economic entity focused on innovation-commodification-consumption has reached the limit threshold of available natural resources and thus endangers the entire self-reproductive system of living beings developed on earth for millions of years. As such, we destroy every day hundreds of square kilometers of forest when it was necessary 3 billion years for plants to completely colonize the earth and set up this extraordinary evolutionary device on which we depend.

It's all about perception

A subatomic particle is not a solid body like a grain of sand. Quantum mechanics considers the particle or "quantum" as a possibility, "a tendency to exist", a quantity of energy which seeks to manifest itself, in short a potentiality. Classical physics assumes the existence of a world separate from us, an external world that we can quantify, weigh, measure. Quantum mechanics cancels this separation, integrates us into its universe to the point where it exists because we observe it and "it is not possible to observe reality without changing it".

Let us come back to the idea of both corpuscular and wave light. If we want to demonstrate the wave nature of the phenomenon, we must choose the appropriate experimental set-up; in doing so we contaminate the objectivity of the experience because we ourselves create the properties of an object because we decide to observe and measure them. We can only demonstrate one property at a time, either the waviness or the corpuscular, never both at the same time. We cannot predict quantum phenomena with certainty, we can only calculate their probabilities.

Thus the most "impenetrable" theorem of quantum physics is that of Bell who, let us recall, suggests that "the distinct parts of the Universe would be, at the deepest and most fundamental level, linked together so as to both intimate and immediate. " Inevitably the question arises: how can two particles separated by millions of light years communicate so instantly? Such communication implies that information travels at a speed greater than light. However, most of physics postulates that "nothing in the Universe can move faster than light." As we see,

the implications of Bell's theorem open the door to several interpretations and of course, divide numbers of physicists among themselves. But the only inescapable conclusion is that: "If the statistical predictions of quantum theory are correct (and they are so to this day), then our conventional ideas about the world suffer from profound deficiencies". Consequently, the physicist Stapp will put forward the theory of the superluminal speed, itself confirmed by the postulate of Sarfatti which he baptized "supraluminal transfer of negentropy" generally called the "quantum leap". What is happening here is intimately and immediately linked to what is happening elsewhere in the Universe and vice versa; there are no separate parts in the Universe. "We cannot extract ourselves from the image of the world." (Zukav Gary, The dance of the elements, Éditions Laffont, Paris, 1982, p.290-323).

We are constantly creating the world in which we live and can therefore influence our reality, but we cannot objectively observe the world because we participate in what the Hindu wisdom formulated in these terms Tat tvam asi, "This is you." But who is this? And the physicist Bohm responds: this is "what is", a "flawless totality", the supersymmetry of string theory. This is where quantum physics makes a metaphysical, if not to say, theological "leap".

In the Exodus, God says of himself: "I am he who is". This is a very important concept because it is the first and only time in all the history of religions that God "speaks" of himself. What does this strange expression of EHEYEH asher EHEYEH mean from the original Hebrew text? "He who is" is the proper name of the proper names because it is indeterminate (Ricoeur). The name is restrictive as much in space as in time; once named, the thing or being is finished, frozen forever. The meaning of "He who is" has been beautifully expressed by Meister Eckhart in his Treatises and Sermons: EHEYEH asher EHEYEH, "I am he who is" means "He who has no name."

"This is why Moses said :" He who is sent me to you (Exodus 3,14) he who is without a name, who is the negation of all names, and who never had a name . "And this is why the prophet said (Isaiah 45,15):" Truly you are a hidden God "at the bottom of the soul, the Bottom of God and the bottom of the soul being only one and even background. " (Maître Eckhart, Treaties and Sermons, Éditions Aubier-Montaigne, Paris, 1942, p.191)

The God of Muslims has the same secret. According to the Prophet Muhammad, Allah has three thousand names. A thousand are known only to the angels, a thousand others are known by the prophets. There are three hundred cited in the Torah, the Old Testament of the Jewish people, three hundred others in the Psalms of David, three hundred also in the New Testament of Christians and finally ninety-nine in the Koran for a large total of two thousand nine hundred and ninety-nine One is missing. So the ultimate name of God is hidden. In Arabic it is called : Ism Allah Ala'zam, the greatest name of Allah is known only to himself.

Here again we must insist on the following paradox, if the Absolute is nameless, inaccessible, unspeakable, that means that we can say everything about it. This paradoxical logic wants the antinomy to be an essential criterion of divine doctrine. (Palamas) Thus several names accompany the ultimate reality, the original arch of the Greek philosophers in the image of the colors of the spectrum which converge towards white.

Thanks to the research of Marcel V. Locquin on the primitive etymology of the names of God, we discover that already in Ethiopia, cradle of the first men, God is called "Devel", literally "Da Va Hel" which means "Knowledge of the mother. divine manifesto and from God the Father ". The Egyptian gods were both male and female and changed roles continually depending on the circumstances, with a man acting as a woman and a woman acting as a man. This particular trait is also found in Yahweh. The work of Othmar Keel demonstrates that Genesis clearly says, "God created man (the first human being) in his own image. In the image of God, male and female he created them. " There are therefore two types of this image of God: one, male, the other, female. And it is only together that they manifest the fullness of God, "notes Othmar Keel, honorary professor of the Old Testament at the University of Friborg. Yahweh, the God of the Bible, also had, in the early days, a female partner, Asherah, according to Othmar Keel. This companion was banished from the temple during the reform of King Josiah, the VII th century BC. Subsequently, a model of a god then develops, in the form of a triad: the god has a goddess next to him, and a child, a sign of renewal, the most famous of these triads is that of Osiris, Isis and Horus, in Egypt. A myth tells of the great deeds of Isis. She is the ideal woman who takes care of her son the pharaoh, and who will bring her dead husband back to life. The triad is present in the Germano-Celtic culture and finally the Christian triad considered as unique god will invade the West. Even in monotheism, we find that the one god has several names.

Let us think of the seven names of god in the Hebrew Bible , also of the 99 names of Allah in the Koran , the thirteen names of the Mayan creator couple, the countless names of the Aztec god Tezcatlipoca, ditto for Viracocha, an Inca god of whom all the other deities do not. were only aspects of himself. Let us think of Indra, Mithra, Varuna, Vishnu for some or Çiva for others who all express the same reality and give substance to the "formless" Absolute as well as the 3,306 other names of God in the Vedas. Sasana, Dhamma, Sakyamuni, Tathagata, all names identified with Gautama the Budhha; let's finish, because the list would be endless, with Kurrichalpongo, the great rainbow serpent creator of the aboriginal world of Australia who carries within him all the eggs, the totems, the names of all the natural and supernatural beings. Each tradition, each religion conceals a character of the Absolute and all these multiple Absolutes (colors) converge towards the Absolute of the Absolutes: the ONE, the White, the Light.

"The real is one, but the educated man calls it by different names. " (Rig Veda, X; 129, 2).

Modern linguistics confirms this adage written several millennia ago. It teaches us, first of all, that languages use different words (the signifier) to designate the same thing (the signified). But even more, by being inspired by atomist theory, phonology brought to linguistics the vision of a phonetic atomism called the phoneme. As for living things, phonology has shown, secondly, that all lan-

guages use the same elementary phonemes, kinds of phonetic atoms according to the same rigorous laws. So, however different they may be, all languages, French, English, German, Arabic, Italian, Spanish, Hungarian, Russian, Japanese, Chinese, Swahili, etc., drink from a single phonetic source and then diversify through relationships. syntax, the whole of which constitutes the grammar of each of them with its vocabulary, its spelling, its variations, its conjugations and its rules of agreement. (Jean Brun, Philosophy of history, p.292-293)

This is how the allegory of the great rainbow serpent of the Aborigines, who carry within it the phonemes of all the names of the natural and supernatural world, finds meaning. So "He who is" is "He who has no name" and also "He who has all names", regardless of the language spoken.

In 1922, a great scientist and Jesuit priest tried to bring the Catholic Church closer to the natural sciences. His writings considered too revolutionary, the Vatican forbade him to teach and publish in 1926. This brilliant paleontologist chose exile in China - we owe him the discovery of the Peking man (sinanthrope) - and then visits all the great excavation sites around the world. Very quickly, his travel diaries turn into philosophical essays that he decides to "pass under the cloak" during meetings with friends or conferences with colleagues. In 1946, the American intelligentsia, favorable to his avant-garde thoughts, offered him to settle in the United States.

Pierre Teilhard de Chardin can then express more freely the great spiritual metamorphosis that humanity awaits: the noosphere. The more the matter, the atom, becomes more complex, the more it becomes conscious, he explains. Man, as the most sophisticated conscious organism, has allowed evolution to access the technosphere, the fruit of reason. This new leap follows the successive spheres which have covered the earth: the lithosphere, the biosphere, the atmosphere. By adding the technosphere, man brings evolution to the threshold of a new leap where the men of the future will no longer form, in any way, a single consciousness, the noosphere announced in 1924, taking up the idea put forward several centuries previously by Anaxagoras, revised and corrected since. In The Human Phenomenon , he conceives of humanity as a stage of evolution leading to the deployment of the noosphere.

De Chardin was probably the first theologian to relate quantum logic and spirituality. "The Absolute is not only in the perception of truths and principles : it is above all in the vital current that we feel within us", "nothing is profane here below. To whoever knows how to see, "everything is being, there is only being everywhere, outside the fragmentation of creatures and the opposition of their atoms." (Teilhard de Chardin cited in Panthéisme, Action, Omega, Éditions Desclée de Brouwer, Paris, 1967, p.27).

He is convinced that the spiritual movement of our time is characterized by the "emergence" in consciousness of a new Universe where God is "as vast and mysterious as the Cosmos ; as immediate and enveloping as Life ; as linked to our effort as humanity. Man must enlarge his heart to the measure of the Universe. " (Pantheism, Action, Omega, op. Cit., P.19)

The Omega point is conceived as the focal point of evolution and will be manifested by the advent of an era of harmonization of consciousnesses based on the principle that "the Universe is psychically convergent" : each center, or individual consciousness. , is led to enter into ever closer collaboration with the consciousnesses with which it communicates, these eventually becoming a noospheric whole.

The term " omega point " was taken up by the American physicist Frank Tipler , apparently without allusion to the name of Teilhard de Chardin and his work; as if there had been a convergence of the concept between science and spirituality. Evolution takes place, according to de Chardin, in the possibility of consciousnesses to communicate with each other and to create de facto a kind of super-being : by grouping themselves through communication, consciousnesses will make the same qualitative leap as molecules which by assembling had suddenly passed from inert to living . This "superluminal" communication between beings takes up exactly the concept emitted by Bell's theorem. Except that instead of communication, de Chardin would prefer to use the term "communion". Teilhard therefore predicts a growing unification of the intellectual (or even " spiritual ") activities of the planet , just as human activities have unified within the frameworks of societies and civilizations , or that of cells in organisms. Not for some mystical reason , but much more simply because the efficiency gains lead to it as surely as, for example, questions of potential "force" a chemical reaction to occur like the deuterium atoms which have merged during the big bang when the temperature is right. Finally, the physical evolution which led to hominization is doubled, according to him, by a spiritual evolution which he calls humanization .

Wondering where this increased awareness comes from, he attributes it to the growth in the complexity of nervous structures as well, in accordance with the theory of "memory points", put forward by the physicist de Broglie : the mammalian brain is more complex than that of reptiles, that of humans more complex than that of mice.

God is the eternal present of movement, without this pure act, everything falls back into nothingness. It is not a static, fixed Absolute, but on the contrary dynamic, in the process of becoming. Man "in the image of God" henceforth takes on a quantum meaning, a fusion of the observer with the "participant." (Wheeler) When man observes nature it is nature that observes itself. When man destroys nature, he destroys himself.

We will discuss in the following pages the concept of light as expressed in contemporary art but first we must ask science to solve the following paradox: why is light emitted by a black body, our sun.

The sun appears to us visually yellow, it emits white light, yet it is said to be a black body at a temperature of 5800 ° K (ie about 5500 ° C). There is reason to wonder ... The radiation of a star is comparable to that of a black body. Indeed, a star is very thick. It is a source of energy (thermonuclear fusion). A surface that absorbs virtually all of the radiation that reaches it appears black like an open window on a very sunny wall. But the radiation is "trapped" there by different processes. Radiation leaves the star, on average, after millions of years. Such a body is known as a "black body". The laws characterizing the state of light in a black body have been established both experimentally and theoretically by Planck's law which expresses the light power radiated, per unit area, by a (theoretical) black body at temperature T This is why we will speak of the sun as a black body at a temperature of 5800 ° K. The luminance of a black body is all the greater the higher the temperature. Planck's law also shows that the radiation of the black body is the same in all directions: it is isotropic.

"The Universe is a machine for making gods". (Bergson)

Classical physics from Galileo to Newton had accustomed us to consider reality placed under the sign of confidence in immutable laws. This period corresponds to that of man conquering new territories thanks to the discoveries of new continents, new civilizations. Nature suffered the same fate, its "hostility" had to be dominated, its order fragmented, shelled. The art scene was a field of experimentation where all research and all claims were expressed : deconstruction of forms by cubism, disfigurement by expressionism, subversion of images by Dadaism. In this sense, cubism, by fragmenting bodies, dislocating them into so many detachable parts, restores Descartes' concept of the body-machine while Mondrian's neoplasticism marked the apogee of the geometric vision of the world since Pythagoras and Galileo during that Italian futurism will linger in making the apology for the movement and speed of the mechanized object. A new concept appears, describing painting no longer as a process of representation but as a method of knowledge.

"The visible world becomes the real world only through the operation of thought" (Gleizes, Metzinger)

Human history is traversed by such fundamental discoveries that it often brings eras to a close. Thus the scientific discovery of Copernicus (1543) who revolutionized the astronomical system by placing the sun at the center of the Universe marked "the end of the Middle Ages and beginning of modern times, because, much more than the conquest of Constantinople by the Turks or the discovery of America by Christopher Columbus, it symbolizes the end of one world and the beginning of another. "(Koyré). In Structures of Scientific Revolutions , the historian of science Thomas Khun relates that in addition to the normal process of accumulating knowledge and discoveries all civilizations were, at a given moment, propelled into a new dimension of reality that brought question the foundations, the cognitive frameworks and even the ideological context which until then made it possible to make intelligible the world and society. These moments of transformation that Karl Jaspers call "axial epochs" are characterized according to Khun by changes of paradigms which constitute the intellectual framework of a new field of knowledge. Another important characteristic is that the paradigm shift is taking place, rather revolutionizing all sectors of human activity, whether science, art, politics or religion.

Year 1890, with Still Life in a Basket , Paul Cézanne departs from Impressionism and breaks with the rules of perspective. But who analyzes well Cézanne already sees, senses the geometric provocation of Picasso's Demoiselles d'Avignon (1907), a true founding act of cubism. After Rimbaud and Symbolism, a new poetic revolution with Mallarmé who introduces the style of the dense sonnet to the words "whose sonority is designed to compete with music." At the Universal Exhibition in Paris (1900), Art Nouveau triumphed in the decorative arts, the Lumières brothers presented the first sketches of cinematography. The following year, 1901, the film The Man with the Rubber Head by Georges Mélies introduced the narrative element in the work and removed the cinema from its documentary function. The filmmaker becomes a narrator, the equivalent of a writer. The Jazz Singer, the first talking film was released in 1927 and announced the creation of the formidable film industry.

Year 1895, Röntgen discovers X-rays, 1896, Becquerel discovers by chance radioactivity, this discovery spawned multiple researches including that of Pierre and Marie Curie who, two years later, in turn discovered radium which in turn triggered the true scientific revolution in nuclear physics. Beginning of the century, 1900, Max Planck, German physicist presents on December 14 his revolutionary work on quantum theory, the founding act of quantum physics. E = Mc 2 will follow , breaking the Euclidean conception of space / time with Einstein's theory of relativity (1905). Finally, in 1900, in parallel with the use of X-rays which probe the interior of the human body, Freud published in Vienna The Interpretation of Dreams and propelled us inside the mind towards the meanders of the unconscious. All we have to do is get inside the atom. At the political level, the beginning of the 20th century marked the end of the great empires. The First World War buried the Austro-Hungarian Empire, Tsarist Russia, the Ottoman Empire, the German Empire of the Hohenzollerz. (Papon Pierre, Le temps des ruptures, Éditions Fayard, Paris, 2004)

The intellectual landscape of the time began to put an end to the mechanistic view of the Universe based on causally linked facts producing effects ordered and supervised by the Great Architect as described by Newton. It is this same model of the Creator God that is called into question by Nietzsche's famous quote: "God is dead". But what could be this paradigm shift which made the great historian Eric J. Hobsbawn say "that there has been no revolution in physics since the years 1900-1927, but only immense evolutionary progress in within the same conceptual framework. " We have seen it already : this new scientific paradigm is the discovery of a logic which makes the paradox an essential path of knowledge. There is no longer any doubt that the discovery of radioactivity, nuclear physics, the theory of quantum mechanics and that of relativity are undeniably the founding acts of a world that will never be the same again.

With quantum equations, everything turns into uncertainty, into abstraction because the outside world, its reality as presented for centuries, shows a new face that reflects the junction between different registers of intelligibility that allows the conceptualization of an analysis grid that integrates the imaginary into the space of reason. Because if science reveals the ordering force of the Universe and explains its logical and mathematical relations to us, it also proves itself incapable of reaching the "intimate nature" of things because it is confined to the world of the verifiable and quantifiable of pure "logos". ". Nature like God will always remain out of reach of reason, hence the recourse to intuition.

The great upheaval between 1900 and 1930, like a huge tsunami, devastated the established forces of machinist "positivism" and scientism, a formal challenge to the Galileo-Cartesian-Newtonian paradigm. It is the whole rational edifice under construction since the Renaissance that falters ; science which wanted to be "queen of knowledge" sees its statue unbolted. This questioning of the intelligible therefore calls for a questioning of aesthetics. The artist's consciousness then undergoes the same fundamental mutation felt by the quantum physicist and adopts the same leitmotif: we participate in nature more than we observe it; what Vasarely will translate in these terms:

"The artist realizes that he himself is nature. His partial vision becomes a total consciousness, necessarily abstract."

Already the impressionists like Claude Monet had committed themselves to "painting the light". To do this, they developed the technique of mixing pure colors applied directly to the canvas in the form of small fractionated spots so that it is on the retina of the eye that the luminous composition occurs. The artist's work found an echo within the scientific community. Seurat and Signac in accordance with scientific analysis of the light spectrum began to decompose the chromatic elements into tiny particles. At the same time, physicists Einstein and Planck discovered that light is both particle (photon) and wave. It would therefore be necessary to replace the term "pointillism" applied to Seurat's painting and "divisionism" for Signac by "photonics", of which it is really premonitory. From their respective work will be born a "grammar of the harmony of colors" allied to optics including the technique of "photonic pointillism" which marked an important stage in the collaboration between art and science. For the first time in the history of art, a pictorial style preceded by a few years one of the greatest discoveries of modern physics. Indeed, these tables were "constructed" intuitively (pointillism of Seurat around 1886, divisionism of Signac around 1900) in accordance with the future laws (1905) of modern physics. The characters and the nature in general of the "photonic" paintings opened the doors to a new type of perception : molecular perception in genetic biology and the perception of the atom (atomization) in pure physics. Pure rationality led to a poetics that was just as new and so hoped for for centuries because it was intuitively revealed by Pythagoras: the universal harmony between the micro and the macro, the infinitely small and the infinitely large.

At the same time, (1886) a certain Georges Eastman invented a chemical process which made it possible to crystallize in luminous pigments the light absorbed on a roll film, a newly patented technique put in a box and marketed under the name "Kodak N o 1." This discovery opened the door to the mass "photonic pointillism" of photography, film and television. This democratization of the visual arts mainly shook pictorial art but also participated in its renewal, not to say its rebirth like a sphinx reborn from its ashes.

Faced with this new technique of reproducing reality that is photography, the painter Robert Delaunay began to compose "color for itself". Inspired by Chevreul's chromatic theories, Delaunay broke away from the representation of the object to focus on the study of light broken down into colors by the luminous prism. This chromatic study will lead him to the discovery of the dynamization of the painting by total abstraction. Art is more than the servile imitation of nature. Moreover, what quantum theory of light teaches us at the same time is that observable reality is a game of consciousness with consciousness, that matter, consciousness and spirit form one and the same Totality. This is why the first abstract artists will seek to transcribe the spiritual meanings of light into everyday life as states of harmony in the world. With his series of Colored Rhythms , Delaunay was the first to construct a "quantum" poetics of color conceived as fields of forces in action revealed plastically by " simultaneous contrasts". Still for Delaunay, the painting must constitute a plastic fact "by invigorating the surface of the canvas with colored sentences generating a space-phenomenon" to "bring to intuition certain properties of the natural or spiritual cosmos."

"White sounds like silence,
a nothing before any beginning "
(Kandinsky)

Invested with new powers, color in art will meet the same fate as equations in mathematics with only one difference ; abstract equations are addressed to the intelligible while pictorial abstraction renews the dialogue already undertaken by Aristotle and expressed by Goethe in his Treatise on Colors , a dialogue, I say, between color and soul.

With his book Du spirituel dans l'art et dans la peinture in particular, Wassily Kandinsky abandons scientific research into color and the geometrization of

shapes (blue circle, red square, yellow triangle) and adopts a more mystical position in accordance with the current of "naturphilosophy" which he calls "principle of interior necessity". Paradoxically, artists at the beginning of the 20th century were inspired by and at the same time openly contested scientific positivism, which caused a slide towards empiricism, most of the time influenced by the esoteric, mystical, theosophical and anthroposophical currents in vogue. From then on, it was a question of reflecting on the network of interdependence that emerges from their teaching.

Unlike previous centuries, avant-garde artists of the "century of color" while being interested in scientific discoveries concerning the chemistry of colors sought to reconcile them with the rather lyrical, poetic approach of color as "Sensation and substance", union of cold materialism with the warm world of emotions, the perfect abstraction being an ecstasy that is both mathematical and poetic. For Kandinsky it was nothing less than discovering the correspondences between painting and music, color and sound. Indeed, he defended the idea that color and form them spring from the same source as music and notes on the one hand and on the other hand, believed that all pictorial constructions are both mathematical and poetic. Painting corresponds to a music of colors whose shapes can be read like the notes on a staff or the numbers and signs of an equation. The painting becomes the equivalent of the "music of the spheres" so dear to Pythagoras, that which precisely opposes the constructive mathematical order to chaos.

Color has less and less to do with physical reality. From Plato, he retains a more spiritual vision, which for example, declared in the Timaeus : the soul of the world is built according to the same rules of harmony as the human soul, which is why Kandinsky will often speak of art abstract as "vibration of the soul".

More than Plato, it was Goethe who greatly influenced the Russian painter with his theory on the power of colors and on the mystique of the human eye : the roundness of the iris as the sun receiving the light and the colors emitted by the human eye. natural sun, the emitter, thus establishing the close correspondence between man and the Universe that Kandinsky will describe in these terms :

"Every work is technically born - just as the cosmos was born - by catastrophes, chaotic clamors of the instruments, which end up forming a symphony which is called the music of the spheres. The creation of the work is the creation of the world. It is up to the artist to replace nature, to anticipate it, and to arrange the chords, the assonances, the relations of the forms, the sounds, the lines and the colors, and that according to what 'he knows about inner Necessity, to create new aesthetic universes ". (Wassily Kandinsky, On Spirituality in Art, and in Painting in particular, Folio Essais, Denoël, 1989)

Kandinsky sought to show us in his works that the relationship between forms and colors is a coherent system resulting from the spirit which aims to bring together antagonists previously in struggle : abstraction and life because "to paint is the stormy meeting of various worlds destined to create a new world from their struggle with each other ". Oppositions, contradictions - this is our harmony, he concludes. It looks like a statement by Paul Dirac on the matter / antimatter relationship. Indeed for Kandinsky, the new physics of Einstein and Planck as well as the psychic research initiated by Freud constitute the framework of a major spiritual turning point of humanity because these works destroy the pretensions of scientistic materialism with its own tools. The new experimental science, abstract art and experimental psychoanalysis form the contemporary trinity of a new spiritualism which is revealed before our eyes.

Inspired by the "mental revolution" initiated by Kandinsky, Piet Mondrian becomes an apostle of a mystique of color (neoplasticism) which invites us to "free ourselves from individualism" to reach "the serene emotion of the Universal. " Neoplasticism is a painting of relations, based on the paradox of the "extreme one" and the "extreme other", which, according to Mondrian, governs the organization of nature and the universe as a whole, and which is reflected in painting by the only contrast of the fundamental colors arranged in horizontal and vertical lines : over the course of his compositions, trees, flowers, mountains, objects become rectangles, horizontal and vertical squares that he distributes on the canvas in proportions governed by the golden ratio known since ancient Greece.

Nature with its curved or broken lines must bow to an art of pure forms, a conception of the world which calls for a new order governed by man. Universal beauty is a plastic and intelligible harmony. Inspired by the axiomatic research in mathematics of theosophist Schoenmakers published under the title Principles of plastic mathematics, his first neoplastic composition represents perpendicular black lines, enclosing in an irregular grid planes of primary colors (yellow, red, blue) and non-color (white, black, gray). The whole evolution of Mondrian as a painter has had as its end the visual interpretation of the universal laws hidden under the phenomena; in short, "the representation of things must give way to the exclusive representation of relations", a plastic representation of the fields of cosmic forces that the theory of quantum fields subsequently demonstrated. From this perspective, elementary particles do not exist in themselves but only through the interactions they generate. This set of effects is similar to a vibratory field: everything we observe is part of a set of fields: electromagnetic field, gravitational field, proton field, electronic field. For Mondrian, in this field of cosmic forces, the painter is a mediator who transforms opposing elements into harmonious compositions and like a god, through creation, the painter breathes life into the canvas. Thus each work, amalgamation of soul and material, reveals cosmic beauty in a different way, which gives the viewer a feeling of appeasement and happiness.

Do we not also find in the work of the Dutch painter a theory of pictorial chaos where the tensions and the sequences of perpendicular and vertical lines, squares, circles, triangles attracting or repelling the primordial colors, form an immense conflicting device? from which arises the constructive dynamism of a plastically well structured order. What at the beginning the gaze perceives as incoherence of plans, structural illogicality, imbalance of the color ranges, off-center rhythm of the forms like so many faults in composition, finally subtly reveal new relationships which transform the apparent disorder into balance.

Mondrian's neoplasticism is a dialectical composition which concerns not only the arts but all the activities of man. Piet Mondrian spoke at this time of universal rest, of absolute balance, he dreamed of a perfectly balanced society and put forward the rules of harmony governing the world in order to escape the tragic disorder of life. The variety of shapes, lines and colors represent so many antagonisms present in nature but unified by a cosmic force that common language calls "beauty and harmony". For Mondrian and Kandinsky, art is a metaphysics that prompts the viewer to have a spiritual experience.

Then came Malevich who pushed abstraction to its last metaphysical entrenchment, its ultimate goal by making it cross the "quantum leap". Painter and philosopher, he will be the first to apply to painting the processes of deconstruction of language that Russian poets use.

"The poets Khlebnikov and Kroutchonykh deconstruct the Russian language by working on its roots and their endings: it is the word as such, the sound as such, the letter as such. The elements of language are worked on. like so many materials freed from any preconceived meaning. Malevich frees painting from any legibility or visibility that does not belong to his own means: it is the supremacy of the color plane ", an art" without an object "," alogic. " (Frédéric Valabrèque, Malevitch in Le siècle rebelle, Éditions Larousse, Paris 1999, p.367)

Malevich, faced with the spiritual apprehension of space, aware of the unfathomable disorder of life, rushes towards the transcendence of all representations to bring art closer to its absolute value. His suprematist theories, formalized with the help of the Russian poet Vladimir Mayakovsky, were first published in brochures under the title " The World Without Substance ". The Russian painter Malevich reached the summit of creative intuition by accomplishing the ultimate work, that is to say, being able to represent the Absolute that man has artistically sought to transcribe since the age of the caves. When Malevich painted his White Square on a White Background (1918), the history of sacred art based on representation seemed to come to an end. The White Square is the farewell of representation, the radical renunciation of any plastic figuration because, as Mallarmé said, "the Infinite is finally fixed". Abstract art rubs shoulders with "the very rumor of the cosmos", "the luminous milk trails" of the Milky Way and "the jumble of shadows" of interstellar spaces. (Georges Duthuit)

Abstract art aptly represents this drive towards "more sophisticated levels of complexity." Trained by modern mathematics and "quantum states", informal art is part of the observation of a radically "revolutionary" new reality. The world of art is the world of the mind .

But beware, it would be wrong to claim that the abstract artists of that time rationally integrated scientific discoveries into their work. The Color and Culture by John Gage, a masterful study of the great color theorists from Plato and Aristotle to the suprematism of Malevich and the minimalism of the 1950s through Newton, Goethe and Schopenhauer demonstrates the opposite. Each era has specific "visual assets". Thus Antiquity and the Renaissance are characterized by a pragmatic approach where artists establish close links with science which remains the main influence. We too often forget that the Enlightenment intelligentsia of previous centuries developed alongside its rationalism a mystical consciousness which drew heavily on the esoteric heritage of the previous centuries; one thinks of course of Hermeticism, of the Jewish Kabbalah, of Germanic illuminism, of English Freemasonry. Indeed, all these mystical currents have metaphysical roots close to the religions of salvation which favored the blossoming of the romantic utopia of the advent of a more beautiful and better world, more noble and pure under the aegis of the visionary artist of a new universal order.

Artists and theorists worked to establish the foundations of a "science of color", let us think of Signac, father of divisionism, of Seurat's pointillism, of Delaunay who applies the theory of simultaneous contrasts, a sort of luminous alphabet, of color, to Kandinsky's painting with its rhythm as in music, its grammar and punctuation as in linguistics, to Mondrian who wants to define a primary chromatic map in relation to the laws of geometry, but all these rational positions are also supported by an esoteric discourse which aims at nothing less than the acquisition of knowledge through art as a supra-sensory experience of the new world. and to match this empirical knowledge with scientific breakthroughs such as the theory of light developed by Einstein's relativity and Planck's quantum mechanics

In parallel with "the science of color" a sociology of art emitted by the Russian-Polish painter Wladyslaw Strzeminski emerged. Too often, art historians, so focused on their subject of study, have been unable to relate, rather to understand that art formed one of the essential paths of knowledge of an era in the same way as science, theology, sociology and politics. Hence the manifest incomprehension of the population in general towards contemporary art. It will be up to Wladyslaw Strzeminski to undertake the study of these interactions and to identify an original concept.

In this study, the painter analyzes the historical evolution of art in relation to the progression of the "visual achievements" of each society. These visual achievements (unism) form a true symbiosis of cultural customs and traditions, scientific knowledge, optical laws and perceptual intuitions and even mythical illusions of a given society at a specific time. As Strzeminski specifies, the conditions in which man lives oblige him to perceive a certain quantity of visual phenomena.

The plastic form characteristic of each epoch develops from the visual achievements then reached, we then speak of syncretism between different objective and subjective interactions just as the interaction between the different waves transforms visible light into organized light, that is to say - say in colors. Since the same process is also identifiable in the perception and organization of sounds, we can therefore speak of conceptual achievements common to the arts in general. Arnold Schoenberg (1874-1951) began the real revolution in the history of music by proposing to replace the seven notes of the scale by twelve semitones. His musical system called "dodecaphonism" introduces an equally radical break for Western thought as Malevich's White Square . Schoenberg rejected the traditional tonality in music in the same way that Kandinsky, Mondrian and Malevich broke the rules of pictorial composition in force for cen-

turies. All four, each in his field of interest, invented a new language considered scandalous by the purists and aroused general incomprehension in the population as well as the new quantum equations. For Kandinsky, "the pictorial and musical dissonance 'of today' is nothing other than the consonance of 'tomorrow'.

In short, all the great discoveries trigger a common analytical process and develop an identical state of mind expressed as much in science, in music as in visual art. At the same time, around 1906, the philosopher Husserl in his Logical Research argued that "pure general concepts" such as words, numbers, spatial figures, colors, are in themselves fragmentary, but the interaction of the concepts between them leads to an "ontology", to a unity. Each concept with its particular "grammar" are the constitutive and inseparable elements of a single equation, the synthesis of which is man at a precise time and place in his history and his culture. Thus the state of mind visible at the beginning of XX th century set in motion a process of synthesis, still present today, old disparate elements considered one thinks electronic music sampling and synthesis " world beat ".

Harmony and unity were the leitmotifs of the time as much in science, in literature as in plastic arts. These and other concepts became the basis of Strzeminski's chromatic research, which the artist called "unism." A pupil of Kazimir Malevich in Moscow during the beginnings of the Russian Revolution, then theorist, ess ayist and artist, Wladyslaw Strzeminski (1893-1952) proposed unism as an extension of supremacist theories towards an optical unity devoid of contrast but obtained by a play on matter.

The seemingly homogeneous painting is made of the successive accumulation of small cells formed by the imprint of some instrument in the very material of the painting. His touch made of a multitude of small dots evokes a pointillist abstraction. At the base of unism therefore rests the principle of total homogeneity of the image, which is governed by its own laws, and constitutes an optical unit devoid of any contrast. According to Strzeminski, two colors which collide destroy, by their contrast, the unity of the painting because they divide it into as many parts as there is opposition. The greater the contrast of colors, the more violent the pictorial conflicts, so the painting finds itself irreversibly divided by the clashes of colors resulting in an amplification of the dramatic tension of the pictorial form.

Even if the unism names a pictorial style, the term is however quite adequate to designate the philosophical concept of research of unity and harmony set in motion since ancient Greece. We think of Parmenides and his poem De la Nature which testifies to a metaphysical search for unity : "being achieves perfection, it is this mass mass like a harmoniously round sphere which everywhere also deviates from its center. . For it is necessary that being should be neither greater here nor less there. From the center to its extreme completion radiates its homogeneous being, sovereignly. "(Fragment 15) Then emerges the eastern paradox of unity in multiplicity (yin-yang) coupled with the western paradox of unity versus complexity. Since the Big Bang theory marking the appearance of creative disorder, the universe now seems to have an origin which justifies the search for a concept of unification and order existing before the initial explosion. This strongly felt need for unity propels contemporary physics towards the writing of a "single fundamental equation from which derive the properties of all elementary particles and hence the behavior of matter in general." (Heidderger)

Painters and writers were therefore increasingly interested in science to the point of triggering Valéry's great project of uniting scientific creation and aesthetic creation in a single synthesis. So much so that the commitment of intellectuals to the search for unity between reason and intuition affected all spheres of knowledge, including mathematics of course. "Mathematics, normally recognized for its positive, rigorous and precise character, is often a poetic work creating a universe of imagination; and poetry, normally loved for its playful spontaneity and supreme ineffectiveness, becomes a mathematical demiurge who assembles words and images to build a highly factual universe. " (Scott Buchanan, Poetry and Mathematics cited in www.paulbraffort.net/science_literature , ch.3)

Thousands of kilometers from the European continent, the Mauritian poet Malcolm de Chazal also put forward the concept of unism. He arrived at this observation by studying the human face . Explaining his theory, Chazal said "the breakthrough came only when I began to analyze the human face in depth. Immediately I perceived that all the parts of the face were connected, fit together, were interrelated and inseparable from each other. " (Sens-plastic, p.312)

And the poet Saint-John Perse concludes with these words : "In truth, all creation of the mind is first of all" poetic "in the proper sense of the word; and in the equivalence of sensible and spiritual forms, the same function is exerted, initially, for the enterprise of the scientist and for that of the poet. Discursive thought and the poetic ellipse, which goes further, and further? And of that original night where two born blind men grope, one equipped with scientific tools, the other assisted only by the flashes of intuition, which therefore rises earlier, and more charged with brief phosphorescence? The answer does not matter. The mystery is common. " (cited in www.paulbraffort.net/science_literature , ch. 5)

So we support that ultimately it is the syncretism between reason (science) and intuition (philosophy) to the search for unity which is the main characteristic of abstraction proposed by the artists of the XX th century which represents monochrome the climax and the ultimate threshold. Scientific discoveries were integrated into abstract art and the latter thus injected in return a little "poetic mysticism" into science as if the artist had discovered a metaphysics hidden behind the equations.

Announced as "final liberation", the abstraction is intended to be a manifestation of "pure nature", almost atomist in the sense that it designates not a real object but an idea, a product of the mind or according to Kant's formula : " The beautiful is that which pleases universally and without concept " . Beauty does not need an object at the limit since it is sensation, a "vibration of the soul," said Kandinsky. Russian art, mainly that of icons centered on the allegorical

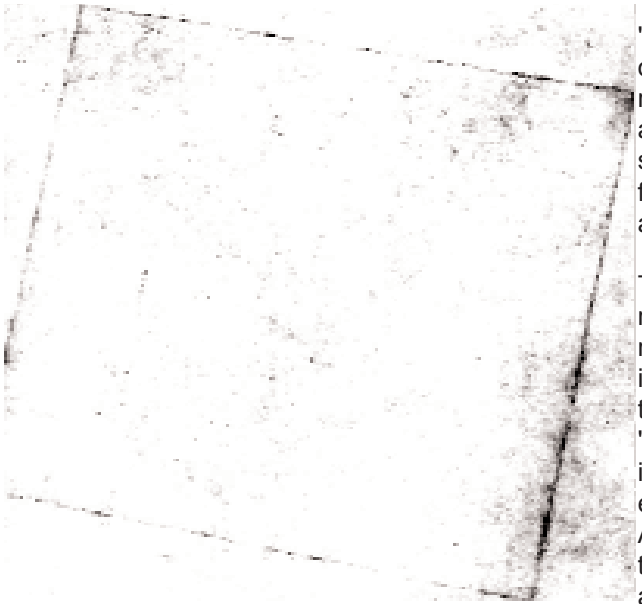
power of "making the invisible visible", has always been at the center of the metaphysical research of Russian avant-garde artists. Moreover, Malevich hastened to qualify his supremacist paintings as "icons of our time" in front of which the spectator knows the last "moment of truth", irradiated by the spiritual energy which emerges from them. This is the ultimate point to which art could aspire in the effort to achieve the timeless, in its transcendent quest for the unlimited.

The white monochrome as the ultimate abstract icon is pure energy where the inexpressible is contemplated in its purity. The aesthetic interpretation of Malevich's White Square would be one of the most important matrices in the pictorial tradition for understanding and above all feeling the sublime. The abstract image ceases to be a representation to become an aesthetic ; it no longer copies reality, it symbolizes it, hence the suprematism "namely the supremacy of strictly pictorial means - colors and shapes - over simple representations of the visible world of appearances", a "supremacy of pure sensation" capable of make perceptible the "solemnity of the universe" in which the opposition between man and nature, spirit and matter is abolished. (Karl Ruhrberg, Art in the XX th century, p.163-164)

The gaze meets the soul and succeeds where words have failed ; the inexplicable is revealed by clarity, silent illumination. Monochrome represents for painting its ultimate threshold and constitutes a point that one can no longer cross ; it is Planck's wall of quantum physics transposed into abstract art. Indeed, it is up to the famous German physicist Planck to point out that science is incapable of knowing what happened before 10 43 seconds during the initial big bang since gravity raises an insurmountable wall to any rational investigation. Beyond the "Planck wall" is the total mystery. Beyond this wall hides an unimaginable reality. Monochrome thus reveals just as much as it hides the same ultimate secret.

"The essence of Everything is a secret in a secret, the secret of something that remains veiled, a secret that only another secret can teach; it is a secret about a secret that is veiled by a secret." (anonymous)

With Carré blanc sur fond blanc , art rediscovers the "primitive" mystique of pure feeling, a sort of illumination in transparency. The colors, the form, the objects, the beings are not denied on the contrary but reach their "existential" finality in their fusion with the transparent Whole. (The square and the background, both white, are distinguished by the application of brushstrokes. The light playing on the textures, the figure and the background are differentiated by their tonality. This differentiation in the shades of white makes Square white on a white background is not a pure monochrome but most art historians agree in attributing the authorship of the monochrome to Malevich)



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Malevich could not go further - for him painting reached its peak - at the age of forty, he stopped painting but art remained and the artist then redirected his career towards constructivist architecture.

The White Square , by the cosmic force which is infused into it, is the final result of an obstinate search for the invisible and the supernatural undertaken for several millennia by our prehistoric ancestors who had the strong intuition of their existence. It is the theological affirmation of the One, by definition unimaginable, inconceivable, inaccessible. Malevich succeeded in imprinting in the "matter" the absolute unity from which all beings derive, to metamorphose the canvas into a force representative of the overall experience of being fusional.

"Having conquered" the reign of the sun "(that of the old" terrestrial "logic), the appearance of these pictorial planes affirms the establishment of a new order, an order situated beyond the limits of our understanding. Its logic no longer refers to our "world of flesh and bones", it is superior ". (Andrei Nakov, The avant-gardes, the Russian avant-garde, p.14)

This revelation of light, as the subject of the pictorial representation, crosses the canvas like the cosmic rays of the sidereal infinity and Malevich, concluding in his Suprematist Manifesto , "that at this moment, the path of man passes through space. "Suprematism," semaphore of color ", is located in its" infinite abyss ". The Russian painter accomplishes a real "miracle of art" that is to say that "the Absolute becomes accessible to consciousness through the intermediary of the work which reflects it" and in this sense, the white square on the background white , light on light, is far superior in its purity to the calligraphic abstraction of the Muslim Allah or the tetragrammaton JHVH the unpronounceable name of the Judeo-Christian Divinity.

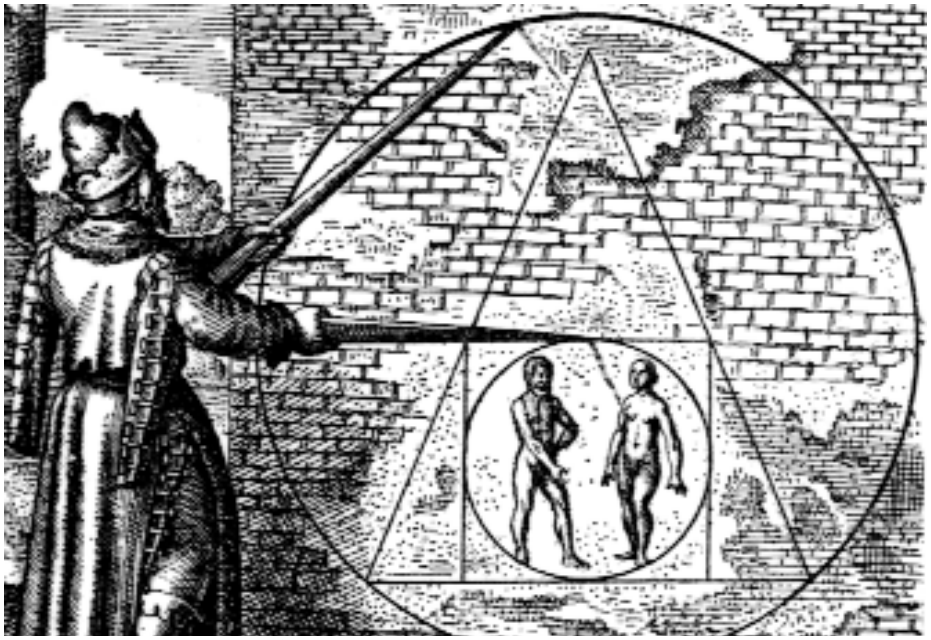
Also metaphysically, what Malevich brings to light, it is the case to say it, is that the different gods (animism, polytheism, monotheism) of the different cultures are only varied analogical modalities for reaching the One; like the different colors of the spectrum which all converge towards white as demonstrated by Newton (1669) with the theory of the composition of white light. One is not by a number but the unity of numbers, it belongs to the same mystery as light. Each number carries in its essence the primordial unity. Thus each religious universe manifests the Absolute according to its own laws and sacred rites.

The perceptible exterior forms (exo) are symbols opening onto the interior dimension (eso) of everything, from the atom to the galaxies. Thus, the exterior multiplicity communicates with the interior unity. The meeting in the white of the multiple colors foreshadows the order and the ultimate beauty that Buddhists call the "Clear Light" called the "Universal Void". This clear and pure light symbolizes the state of Buddha through which the awareness of the universal void was revealed, Emptiness (shunyata) sort of "instantaneous illumination" of the divine Essence related to the kouwa (Him) of the Muslim Sufis or the Ein Sof of the Jewish Kabbalists.

From time immemorial, man has made representations of gods as well as representations of the world which are constantly renewed through historical events, cultural developments and scientific knowledge. In fact, as Schopenhauer declares, "the world is my representation", an affirmation confirmed by Heisenberg and his principle of uncertainty and transposed into art in this declaration by Duchamp : "the viewer makes the picture".

This is the case with the square. Indeed, why Malevich chooses a square rather than the circle ? Undeniably, the square of Malevich reconnects with the sacred dimension of the primitive art of the line. Through the line, the mind opens up to mystery, to the abstract representation of a magical order. First ornamental, the scarification line on the skin of men and women, from prehistoric times, wants to show both the membership of a member to a group, his social rank, his personal totem and his relationship with the divine. The primitive tattoo is the art of spiritual language and the eye, receptacle of spiritual waves materialized thanks to the light, conveys to the brain the collected perceptions that the thought orders in knowledge then in traditions. Creative thinking promotes understanding of symbols. Since Archaic times, the circle represents the visible world : circle of the sun, the moon, roundness of the iris etc. At the time, it was not a geometric sign but a sacred symbol which oriented the mystical perception of celestial phenomena and enigmatic constructions of the natural world towards the search for a "presence" which manages the harmony of this Universe. The circle is therefore the bearer of a natural magical power which man, as an affirmation of his own creative power, invented the square as a symbol of the power of culture. Thus for Malevich, the square is the primary atom of human creativity, therefore the basis of geometric suprematism.

"The seat of human constructions, it is (the square), according to a practical and realistic vision, the first rationally inhabitable figure. (…) The square evokes stability, but this does not exclude dynamism. Its space offers, in fact, multiple resources. (…) The four equal sides of the square face the four orients of the World. With it, man has the feeling of leaning on the Universe. (…) While the circle forms the undifferentiated whole, the square expression of the FOUR, is the symbolic manifestation of the accomplishment of the whole. " " The symbolism of the square and that of the number four (...) merge. The tetrad, number of the square, passes for the perfect number: it is that of the letters of the divine Name. The Hebrews made the Tetragrammaton (JHVH) the unpronounceable Name of the Godhead. (Roger Begey, The squaring of the circle and its metamorphoses, Éditions du Rocher, 1993, p.61)



From the male and the female, make a circle,
then from there a square and then a triangle ;
make a circle and you will have the Stone of the Philosophers ".
(engraving attributed to Mérian)

The square does not exist in nature on a human scale, incomprehensible even unthinkable for our primitive ancestors. It will begin to reveal itself at the origin of civilization with the Mesopotamian ziggurats and the Egyptian pyramids because there are no pyramids with a triangular base despite appearances. The ancient pyramids have a square base. These are superimposed squares narrowing down to just a point. In Roman times, Vitruvius, architect and engineer in the first century BC, wanted to inscribe the human body in perfect geometry. He concludes that a man with arms and legs apart, could be inscribed in the same way in the perfect geometric figures of the circle (homo ad circulum) and the square (homo ad quadratum).

"The center of the human body is also by nature the navel; in fact, if we lay a man on his back, hands and legs apart, and point a compass at his navel, we will touch tangentially, describing a circle, the tips of the fingers of both hands and of his toes. But that is not all: just as the figure of the circumference is realized in the body, so we will discover the diagram of the square. in fact the measurement is taken of a man from the soles of the feet to the top of the head and that this measurement is transferred to the line defined by his outstretched hands, the width will be found to be equal to the height, as on the square areas squared ". (Vitruvius, De Architectura, III, 1, 3)

During the Renaissance, Leonardo da Vinci will take again the calculations of Vitruvius and will compose the sketch of the famous drawing on the rules of human proportion. The square is a human invention, rather a human intuition

finally "seen" naturally and demonstrated several centuries later thanks to the microscope since many minerals crystallize in the shape of a cube.
Thus cubism, although revolutionary for the time, nevertheless remained attached to the old values of Newtonian science and a prisoner of the figurative. Cubist bodies and objects deconstructed into juxtaposed segments offer the asymmetrical vision of a discontinuous world, without family ties where tension, ambiguity, contrast and controversy creep in, prefiguring the First World War which will put an end to the movement. initiated by Picasso and by Braque while the white square on a white background by Malevich of the post-war period will become the perfect modern symbol to represent the thought of the new man in communion with the Universe, ardently urging the reconciliation of peoples on Earth.

Like Einstein's relativity and Planck's quantum theory, art and theology also showed the appearance of a universe in relation to a "force field", a sort of unfathomable cosmic synergy. It will be up to the painter Josef Albers with his series Hommage au carré to express that the almost infinite combinations of visual possibilities make it impossible for one to prevail over the other.

Malevich's monochrome raises many questions about the relationship between scientific concepts and art but also involves its part of teaching. So when it came out, Malevich's canvas created a scandal, it represented nothing, it was an empty space hung on an empty wall, a void interpenetrating a void. He had just completed three thousand years of scientific research since Hesiod first emitted the hypothesis of the Origin of the world from a vacuum. Today, in fact, quantum physics puts into equations the spontaneous emergence of the Universe from the fluctuations of the Void and also demonstrates, paradoxically, that the interstellar cosmic void despite the appearances of the "empty canvas" - n ' let us not forget that the painter's canvas is woven from millions of billions of atoms - is nevertheless filled with an infinite energy coming from a dark matter, which Enrico Fermi called nutrinos, a proposition which exactly matches Malevich's vision. This fullness without words, without form, nor color - white is a non-color - is inscribed in a continual interrelation with the quantum environment so that the work is never identical but always in becoming like the Universe, until proven otherwise, continuously expanding.

Le Carré blanc is faithful to paradoxical logic in that it leads us to consider white, light both material and immaterial, as the only possible attempt to concretely represent the supreme abstraction.

The White Square by Malevich can be watched in any direction, there is neither up nor down, neither right nor left, no sense was predetermined, nor perspective, according to the axiom that " 'Universe has no ceiling, no floor, no foundation, no horizon'. Paradoxical thought obliges, would the extreme abstraction of the White Square be at the same time, the most realistic of all paintings ? As if reality, reason and abstraction, intuition are essentially delivering the same message.

In Critique of Pure Reason , Kant demonstrated to us masterfully that our reason has limits and that it remains strongly linked to human experiences, when reason goes beyond and into the hereafter, everything then becomes speculation. In other words, the proofs of the existence or not of God are not accessible to reason.

"Our reason is absolutely incapable of discovering the relation which exists between a world, as we can know it by experience and supreme wisdom." (Kant's successive thoughts on theodicy and religion, Edition Vrin, Paris, 1967, p.204)

Subsequently, Schopenhauer thus agreed with Kant: we know "appearances" and "phenomena" and not "things in themselves" much less an absolute or God.

But in return, reason has, at all times, from prehistory to the present day, had a natural inclination towards transcendence where thought tries to exceed its limits driven by a kind of metaphysical need deeply rooted in human sensitivity. In the absence of proof, does the human drive attracted to the idea of God have a function? Yes ! answers Kant: God is "the ideal of reason", a regulating idea, a regulating principle of human thought having the function of annihilating existential anguish and neurotic fears, added Freud. God is not an object, nor a real character, but an idea, not a truth but a thought of salvation which delivers man from his tragic destiny. Now, can the regulatory idea, however meaningful it be, manifest itself in the tangible?

Where can God hide himself, hide himself in nature? Is it hidden in the totem of the cave bear of primitive hunters, in the plants of matriarchal agrarian societies, in the animals of pastoral nomadic societies, in the sun of the Egyptians or the Incas, in the moon of the Mayas and Aztecs? ? What about these primitive hands engraved or painted in prehistoric caves seeking to seize the magical animals drawn on the walls, reminding us of the hand of God in the Sistine Chapel which joins that of man, thus calling him to life? What can be both visible and intangible?

The White Square is the last real answer, and perhaps the only one, that art could provide to this open question, since prehistoric times and cave art, on the ultimate representation of God: the Origin, when contemplated with "the eyes of the soul", is enlightenment. Art has achieved celestial purity: White, symbol of origins, life, death and rebirth.

In the Neolithic era, pastoral societies gave white wines a very powerful status since milk was their primary food source. In Africa, father's semen and mother's milk are the genesis of life. Milk is then poured on the altars as an offering to the Gods and the white color accompanies most initiation rites since the initiate is the one who has just been symbolically reborn.

White represents wisdom, it identifies with the inner light in many religions. In India, ancient texts designate white as the state of purity of the Brahmins. In the Buddhist pantheon, Gautama the Buddha is shown in white symbolizing transcendent wisdom. In Japanese Shinto rites, sheets of pristine white paper are placed in places of worship to encourage the contemplation of pilgrims to

achieve enlightenment. (Anne Varichon. Colors, p.10 and sss)

White as absolute purity is associated with divine power. White is therefore the primordial light, the origin of the world, the beginning of time, everything that relates to the transcendent. We find this association in monotheistic religions and in many societies. Both in the Bible and in the New Testament , white is the color of God transfigured. The white light which comes from above and blinds us with its power, represents first of all the Divine, the one that we do not see because this white solar light is dispersed by refraction, dazzles us, and we cannot look such intensity "in the face": this divine light makes us lower our eyes and adopt a humble attitude. Thus in ancient religious paintings, God and his messengers descend from Heaven in the form of a blinding light of pure white. Naturally the sovereigns who represent the authority of the Church, therefore of divine essence, adopt the color white: the standards, the fleur-de-lis.

Art has achieved the goal of its metaphysical mission. Let's not forget that art and religion are Siamese twins born in the same Paleolithic cave. Since prehistoric times, art and the sacred have been intimately linked by the same umbilical cord, the first seeking the representation of the second.

"Jesus takes Peter, James and John with him and leads them alone up a mountain apart. And he was transfigured before them and his clothes became resplendent, so white that no fuller on the earth can whiten. the type." (Mark, 9, 2-5)

This is the case with the Koran in which white designates the notions of clarity, of unity in the image of Allah. White is also the secret corresponding to the inner light among the Sufis, relating to the inner core of being. During the pilgrimage to Mecca, the Muslim wears the irham for the occasion, a white garment which abolishes any distinction of nationality and social class.

"Allah has seventy thousand veils of Light and Darkness: if he were to remove them, then the splendours of His Appearance would undoubtedly consume all who saw Him with their gaze." (Commentary (Ghazali) of the Light Verse of the Quran)

It is through the mediation of the created object that humans will learn to know themselves; at that time, art was mainly educational:

"Let us not doubt it: everything that man adds as needed without any additional satisfaction, what is called art, has only one motive: to manifest to himself that he does not is not that a living; that he is not only a being who eats, who drinks, who sleeps, who fights, who moves but a spiritual subject who knows so well how to rise above the demands of the organism ... "(Gobry Ivan, The Meaning of Beauty, p.25)

The function of art then is to reveal man to himself. This is the conclusion to be drawn from Malevich's work: "white supremacism" as "pure action" of pure mental energy propels Man into the "revolution of the pure spirit" which goes beyond materially experimental knowledge. Intuition and Reason, far from being in opposition, are united forever in the Unity of White, of Light.

The mystical theology of Light developed by the monks is part of a search for union with divine energy "which transforms the body and makes it spiritual (...) so that the whole man becomes Spirit" . (AI Triads, 2.9). This means that "he who participates in divine energy (...) himself becomes, in a way, light; he is united with the Light, and with the Light he sees in full consciousness all that remains hidden from those who have not had this grace "Not only is light the most adequate revelation of the very essence of divinity but the mystically perfect being is itself transfigured, shining, radiant. (V. Lossky, Theology of Light, p. 110 cited by Mircea Eliade in History of religious beliefs and ideas, Payot, 1978)

"You have granted me, Lord, that this corruptible temple - my human flesh - to unite with Your holy flesh, that my blood mingle with Yours; and henceforth I am Your transparent and translucent member." (Symeon the New Theologian)

The entry of the divine Light into the consciousness thus makes it possible to discover the perfection of the Origins and the End, from the Paradise before history, to the ultimate fate of man who will put an end to history. In sum, all the great ancient mythologies attributed a luminous nature to the divinity or the entity which holds the transfiguring knowledge.

In India, the Light is the very essence of the Cosmos through which the veil of maya is torn. Cosmic creation is a divine "game", an illusion (maya) and only illumination makes it possible to pierce the mirage, to decipher the secret of maya , thereby grasping that life is a free and spontaneous "game" of divinity.

For Aristotle, the unchanging cosmos projects its white light on all the celestial spheres allowing the incredible spectacle "fire and light" of the nocturnal twinkling of the stars, the white light of the sun crosses the ether to come to radiate the earth of colors ; color, for the Greek philosopher, being a "corruption", a degradation of the primordial white that has come to be damaged by diffusion, by diffraction, by refraction and by absorption, on objects, things, beings.

For the Chinese, spiritual Light is light of knowledge confirmed by the ming character that unifies the lights of the sun and the moon, synonymous with Enlightenment for Buddhists. In Islam, En-Nûr , the light is essentially identical to Er-Rûh , the Spirit, idem in Iran where, Zoroastrianism speaks of the consubstantiality of the spirit / light which ensures the final victory of the "Light of Glory" on the darkness. The Mystery of the Golden Flower , a Taoist text, considers that the Essence of life is contained in the Light of the heart and which must be continuously circulated within the body.

The Tibetans speak of the common origin of the world and of man in the form of a myth which tells that from a Light emanating from the Primordial Void was generated an Egg, from which burst the white light of the Universe which in turn engendered an Egg from which the Primordial Man emerged. Finally, The Tibetan Book of Death speaks of it as the light of a "Pure Truth" where the

deceased will have to choose between the brilliant light of Wisdom or the dull white light of the devas , impure light that perpetuates the cycle of reincarnations and means the return to earth. (Chevalier / Gheerbrant, Dictionary of Symbols, 1982. Eliade Mircea, Méphistophélès et l'androgyne, 1962)

This identification of Light with the consciousness of being is also taken up in the Old Testament. In Genesis, the Fiat Lux !, "Let there be light!" is the symbolic interpretation of the Illumination of the world, ordinance of chaos. According to the Vulgate, Latin translation of the Bible approved in 1546 at the Council of Trent, Adam and Eve were tempted by Lucifer which in Latin means "bearer of Light", that is to say bearer of the knowledge of good and evil, carrier of the consciousness of being. When Moses returned from Mount Sinai, his face was so bright that the people were afraid.

Thus the New Testament often mentions that we are "children of the Light" meaning that we have in addition to a biological origin, a spiritual lineage revealed by the illumination of the baptism of fire initiated by the Holy Spirit. Obviously, this metaphor of light as "full of the Absolute" will be Teilhard de Chardin's favorite. From the "universal focus" radiates the "celestial light" which penetrates the "crystal of beings" because it is again in the way in which the ray penetrates the crystal that God becomes "universally tangible and active" "thanks to the immense layers. of the created. " (Pantheism, Action, Omega, p.30)

It is therefore universally recognized from prehistory to the present day that the mystically perceived Light is synonymous with transcendence of the terrestrial world and immanence of absolute freedom contained in supreme knowledge, as the sign of the revelation of the ultimate Reality. The nature of this otherworld, despite cultural and religious differences, calls into question the structure of the Universe as perceived before. The experiences of light are at the heart of great spiritual revelations as much as of great scientific discoveries.

This mystique of light from ancient time after the intuitive knowledge of the contemplative is echoed in the beginning of the XX th century in modern physics where we discover that the electron is well and good bearer of light; that he can remain wisely in his paradise in the heart of the antineutron or else take action, disobey and leave his Eden by the disintegration of the antineutron. (Charron) It is through this act of "rebellion" that the electron begins to "exist" and to increase its luminous flux. This electron charged with light thus becomes the motor of all cosmic evolution, of matter and of life, and finally, bearer of knowledge, of memory, and therefore of Spirit. Thus the paradox of light as a corpuscular wave of modern physics refers to the paradox of God, transcendent and immanent at the same time. This "interior Light which dwells in us", this "golden flower" is now perceived as much by the mystic as the atheist physicist or the contemporary artist.

"The mystery of life is not a problem to be solved, but a reality to be experienced." (Alan Watts)

According to Heisenberg, the world of abstract equations of pure physics reveals their intrinsic poetry, all imprint of harmonious links which then propel the individual who conceives them to ecstatic, not to say mystical, heights.

The beauty of a mathematical equation from De Broglie or a quantum equation from Schrödinger or a theorem from Gödel or Zermelo or algebraic and geometric calligraphy, largely demonstrate that a great force is at work; masterpiece before which Kepler exclaimed: "Mathematics is the archetype of the beauty of the world." Thus the equation becomes the icon of intelligible beauty revealed by cosmic relations. And Paul Dirac, the great scholar and Nobel Prize in Physics, to continue in an article in Scientific American ,:

"One might ask : why is nature constructed this way? And the only answer then is that our current knowledge of nature seems to show us that this is indeed how it is constructed : we have only to accept the fact "(May 1963, p.53)

Quantum logic teaches us that primordial symmetry is the harmony of all existing asymmetries, string theory provides a truly unified theory, since it proposes that all matter and all forces arise from a single ingredient which are microcosmic strings, like white is the sum of all the existing colors of the spectrum (Newton), like the number ONE contains all the numbers (Schuon), like God, the Great Manitou is the sum of all beings ; God as a thought where man incorporates the other, fusion of races in Humanity. (de Chardin) Thus the intuition of the abstraction artists of the 1920s becomes concrete, art, science and theology can form a single system of thought that the work of art and the equations make visible . In this sense, artists like Malevich, Kandinsky and Mondrian are not spokespersons but image carriers of the paradoxical thought underlying the staggering equations of quantum mechanics.

Here again Malevich is faithful to Heisenberg's equations on the relations of uncertainty according to which passing a certain stage of observation, such or such aspect of nature becomes blurred, thus as in mystical theology, the Universe like God becomes unspeakable, unrepresentable. This vague and obscure concept of uncertainty is clarified thanks to the enlightenment of Montaigne : "since human intelligence is incapable of reaching definitive truths and certainties, no philosophical or religious discourse can claim to prove its validity by rational arguments . Therefore we can only believe or adhere in uncertainty. In such a posture, uncertainty does not mean doubt. It simply means that one can have faith or convictions in philosophical or religious matters, but these are in no way dogmatic, intangible or absolute. " (Frédéric Lenoir, The Metamorphoses of God, p.53)

"We must now seek how, for our part, we can know God, since he is neither intelligible nor sensitive and nothing absolutely belongs to him that belongs to beings. We must say in truth that we do not have of God a knowledge founded on his own nature, because this is unknowable and it exceeds all reason and all intelligence. (...) He is the object of intellect, reasoning, science, contact, sensation, opinion , imagination, appellation, etc., and yet it is seized neither by intelligence, nor by reasoning, nor by word. It is nothing of what is, and therefore cannot be not to know him through nothing of what is, and yet he is all in

all, he is nothing in nothing and yet he is known by all in all at the same time that he is known by nothing in nothing. " (Dionysius the Aeropagitus, The divine names, 7,3)

This text by pseudo-Dionysius is a fundamental writing of Western Christian mysticism and yet it remains unrecognized by most Christians. The mystical theology of Dionysius the Aeropagite, his most accomplished work, is among the principal sources of the greatest theologians. The different names and images of God tell us nothing about his essence because it remains inaccessible to rational knowledge like quantum paradigms so complex that they are incalculable. It will be for Moses Maimonides, one of the most eminent and influential scholars in the rabbinical tradition, considered the most important Jewish philosopher and theologian of the Middle Ages, to close the debate by declaring that "God himself is the 'unthinkable "definitively putting an end to all theology and exegesis as" science of God. " Of course, as we can doubt, all of Maimonides' work was burned, in 1233, in the public square in Paris by order of the Inquisition.

Subsequently, Cardinal Nicolas de Cues (1401-1464) dared to assert in the middle of the Inquisition that: "in reality, he is known only to himself". Among our contemporaries, Edgar Allan Poe makes this comment : "I have imposed on myself the task of speaking of the physical, metaphysical and mathematical, material and spiritual Universe: of its essence, of its origin, of its creation, of its present condition and its destiny. (…) So let's start right away with the simplest word, Infinity. The word infinite, like the words God, spirit and some other expressions, whose equivalents exist in all languages, is, not the expression of an idea, but the expression of an effort towards an idea. It represents a possible attempt towards an impossible conception. " (Edgar Allan Poe, Eurêka cited in www.palbraffort.net/science_literature , ch.3)

No concept can therefore express it; it is inexpressible, indecipherable, it is not a Nothingness since it transcends everything and yet it is not separated from the world since it is also immanent in everything and crosses the essence of man as a Mystery that encompasses. Because the day necessarily comes according to Malcolm de Chazal in Sens-Plastique "where man suddenly sees himself at the frontiers of the Untranslatable , in the realm of Beyond words , in the countries of the Inexpressible ." Whether cyclical or in eternal expansion, the One is not only multiple, complex but in eternal movement. God is a nomad of infinity in perpetual transformation since the fabric of the Universe continues to become more complex before our eyes, a sign that he has not completed his evolution.

"The One is striving to evolve into an ever more complex, advanced and conscious form of existence whether here or otherwise, in another world. Our religious view of evolution means that the divine energy goes forward and up… to more sophisticated and complex levels of complexity ". (Arthur Green, Seek my face, Speak my name, Northvale, NJ, Jason Aronson, 1992, p.71)

Theologically and scientifically, we find ourselves facing the same cul-de-sac. The complexity of reality or of God leads us through an inextricable network of interrelations whose unheard-of number results in an entanglement such that it is impossible to understand their meaning. The scientist Henri Atlan expressed this difficulty in these terms : "complexity is an apparent disorder in which we have reasons to suppose a hidden order ; or again, complexity is an order whose code we do not know. " So it is with God, the primordial Unity is so complex that it defies all knowledge and analysis, hence the Mystery. So much so that the real-in-itself is a swarm of ambiguous and above all paradoxical conjectures.

"At the same time, the impeccable Order of the Universe gave way to an uncertain and enigmatic combination of order, disorder and organization. (…) So much so that all the advances in knowledge bring us closer to a stranger who challenges our concepts, our logic, our intelligence. " (Edgar Morin, The Method-3, p.14)

The Universe is much more than what we perceive of it. It is an open and emerging system. It is the place where even the imagination gets lost in the meanders of antimatter. By our perception, we constitute existence, of course, but sometimes, it is necessary to let the mystery hover instead of wanting to name absolutely everything. Our way of breaking up the world and classifying it into parts and all is relatively arbitrary. The deductions made following Gödel's theorem still come to haunt us : "there are mathematical statements whose truth or falsity cannot be proved by using the axioms and the rules of mathematical deduction. Thus one cannot demonstrate the proper coherence of any logical system including arithmetic. " (John D. Barrow, Why is the world mathematical, Éditions Odile Jacob, Paris, 2003, p.68)

Moreover, even scientific knowledge is provisional since our understanding of the physical universe using both classical and quantum equations are random, just as random as poetry. Only beauty remains.

"All this visible world is only an imperceptible line in the ample bosom of nature. No idea comes close. We have swelled our knowledge beyond imaginable spaces, we only give birth to atoms, at the cost of the reality of things. It is an infinite sphere, the center of which is everywhere, the circumference nowhere. Finally it is the sensitive character of the omnipotence of God, that this imagination is lost in this thought " . (Blaise Pascal, Pensée, complete works, Edition Gallimard, La Pléiade, Paris, 1954, p.1105)

We know that for the Greeks the main characteristic of the Universe was its beauty and this visible beauty of the stars joined in emotion that of the chalice of a blooming flower, the smile of a child and the proportionate forms of a statue of 'Athena or Parthenon.

There all is order and beauty
Luxury, calm and voluptuousness.
(Baudelaire, The invitation to travel)

The experience of direct spirituality with its surroundings can be compared to the personal experience of the beauty of the world. In both cases, direct experi-

ence induces in the conscious being changes in the way of thinking, acting and feeling. This spiritual experience therefore makes possible the unity and solidarity between the world and the "Great Spirit" as the Amerindians once affirmed; what science today translates in these terms : it is through man, his conscience, his language that nature dialogues with itself : "when I speak of spirit, I speak of nothing. other than nature, which is reflected in the speaking being, in the speaking body (…) "(Kirscher cited in Conche, 2005, p.194)

In short, we owe it to ourselves to learn modesty in the face of beauty. Will the man of the 21st century be capable of it? This modest vision of humble man before nature is the only one that can guarantee a future for humanity and face the current ecological challenges. You see, nature has not yet said its last word. We knew that man uses only a small part of the possibilities of his brain and now the decryption of the human genome shows us that the body barely uses a third of the genes. What good can all these brain cells and other untapped genes be used for if not to tell us that nature has made reserves because quite simply evolution is not finished.

Only poetry can make the mystery of the living tangible and make us love life until death, which alone will deliver us from our exquisite illusions. Without poetry, humanity dies of boredom. The men who painted the gigantic frescoes in the Lascaux caves sought to resolve the same questions facing modern science, and only art and mathematics with their transcultural and transhistoric character succeeded in representing the poetics of the unspeakable. We can even affirm that cave art is as contemporary, is as current as quantum equations. The search for the Ultimate has always been confronted with the enigmatic . Since nature is no longer for us a poem in disorder, it is up to the scientist to collect the scattered fragments; it is up to the philosopher to explain them and to the poet to reconstitute their primary unity.

"In each era, we must try to tear tradition away from the conformism that wants to take hold of it." (Walter Benjamin)

"All scientific theories are only metaphysical abstractions, (...) Man needs something that speaks to his feeling. Feeling will always dominate reason. Metaphysics will never disappear ". (Claude Bernard)

This feeling of metaphysics is called spirituality and this feeling of spirituality is expressed through poetry. For man is above all a poet. He likes to invent worlds made up of fantasies, dreams, utopias, worlds inhabited by strange, passionate, often monstrous characters, interchangeable universes in tune with the latest scientific and other knowledge. So much so that these scientist metaphysical abstractions like supersymmetry or supercord are to be taken on the same basis and at the same level as any mythology or religion because they use the only language worthy of approaching the unspeakable mystery : the language of poetry. Because all these languages have in common the poetic intuition of our essence and our becoming. Our ignorance of the poetic depth of existence associated with our fragmentary mentality obscures the fact that there is a latent poetry in all expression of language.

This is why it is necessary to understand that all the languages which transcribe knowledge from generation to generation whether they are the Upanishads, the Taoist Yi King, Buddhism, Shintoism, Egyptian, Sumerian, Greek mythologies, African cosmogonies , Amerindians, aborigines, the Koran, the Bible, the Torah including scientific theory and philosophy are only fragmentary and poetic accounts of a mystery that will always surpass us.
This is perhaps what Malevich's white "emptiness" actually suggests : when thought no longer has an object, there begins the poetic experience of the mystery. This disinterested perception gives all its place to the feeling and not only to the thought. The White Square "forces" us to think without words, to appear without an image; hence our confusion because it is made very difficult for us to grasp tangible reality without words or images. In short, we have been trained and educated to be intellectuals and not poets and the more we seek to fill the white "void" with words or images the more the contemplative charm of the canvas vanishes. The void is full of silence. It is in silence that intelligence is strengthened because there is a dynamism of silence which awakens sensitive intelligence which makes it possible to grasp the intuition inherent in any work. To meet beauty, the mind must be emptied of its tensions and from this meeting will be born what Nietzsche ardently desired : to achieve an aesthetic creation of oneself as expressed by the popular adage "to make a poem of one's life. ".

Finally, the world is not reduced to its material dimension, to its space-time and subject only to the laws of physics and chemistry and the slide rule. For many, such a quantification of life comes from a logic of death based on the omnipotence of exchange value and the dissolution of qualitative human bonds. The poetic experience reveals to us a mixed and open organic world rather than fragmented and closed. Poetry is a dynamic process of apprehending reality carried by a continuum between all the components of the Universe, from the largest to the smallest, from the visible to the invisible. So poetry is eternally in the making and establishes an inclusive correspondence between man and nature.

We finally find ourselves with a plurality of figures of rationality and a-rationality but for the last three centuries and still today in many aspects we remain prisoners of a closed rationality incapable of taking charge of the problems of the imagination, the sacred and the psychology of the intimate depths of being, we live under the reign of "impoetry" to use the word of the poet Gilbert Langevin. To exit the XX th century as suggested by Edgar Morin, we must adopt an open rationality, so intellectual posture that recognizes the legitimacy and began a dialogue with other words that give meaning to man, philosophical lyrics, artistic, scientific , cultural, poetic and religious while being aware of their limits and able to recognize that it will probably never be able to grasp the infinitude of reality.

So since "we do not observe the physical world" but rather "we participate in it" (Heisenberg) can we be condemned to tell rather than to explain? Understand that we are irremediably "condemned" to the Mystery since Evolution is an incessant rise of consciousness in the form of "points of memories", it can neither culminate nor end. Here, we can guess, the physicist as well as the artist

and the theologian are confronted with the aura of the work. We too, where all of a sudden, we switch spiritually towards the unspeakable; as if beyond the work or the equation, we felt a dazzling presence. As if by magic, the work, like the Universe, represented an abyss of the divine which becomes flesh.

By the way, dear quantum primitives, have you met a poet lately?

Conclusion.

Thus art, science and theology at the beginning of the 20th century were the matrices of a new language which tore to shreds the great certainties of modernity and their institutions. By admitting the complexity of reality and the limits of reason, the new relativist paradigm which does not claim to prove or deny the existence of God propels human existence into a maximum field of possibilities and rehabilitates traditional mythical aspects which had either been denied or outright banned, or even destroyed. The imagination, the intuition, the a-rational, far from being a threat, become again plausible and participate again in the emancipation of human societies. The symbiosis between rationality and intuition was the key that opened the door to all possible alliances. The nascent Freudian psychology participated in the rise of surrealism while ethnology and anthropology provided an essential frame of reference to the primitivist current of modern art. As for science, it continued to play a major role in various artistic movements such as kinetic art for example. From this unprecedented amalgam emerges the hitherto blasphemous idea of a possible recomposition of spirituality in a modernity in which religious dogmatism itself dissolves. From so-called mass religions, we are moving to a more intimate spirituality, a true communion with the world around us. This recomposition involves a poetics of the sacred inscribed for millennia in individual experience, connecting to supersensitive realities. Because do you see :

"The Universe may not only be more extraordinary than we imagine, but much more extraordinary than we can imagine." (JBS Haldane)

"Beauty will save the world." (Dostoyevsky)

"Dostoevsky's invitation can be worded as follows: let's act as if beauty should save the world. That alone matters. And it indicates that we are able to go beyond the limits of the everyday, that we overcome our fear of the unknown and , especially since we assume all the contradictions that the grayness of the waves of existence conceals from us and that life, on the other hand, so often makes us brutally discover (...) By burning, man can discover the beauty in through ugliness, as he can discover the sacred in the receptacles of suffering. "

"We were asked to systematically search the ugly, the bad, the error at all, but certainly, for most of us, it was a desperate bravado, the mask under which we couvions our décep tion of not having been able to find the true, the beautiful, the good ... "(Michel Mourre, 1951)

"To side with Dostoyevsky to maintain that beauty will save the world obviously amounts to taking an act of faith. But an act of faith which is not and which cannot be carried by any dogmatism. An act of faith in victory. of life on existence. " (Alexis Klimov, Terrorism and Beauty, Editions du Beffroi, Quebec, 1986.)

"Beauty is truth, truth is beauty." (Keats)